Communications Review*

A journal for telecom, cable, satellite, and Internet executives

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Shifting Sands

*connectedthinking

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Message from the Editor

Worldwide, the communications industry is experiencing major shifts that are bringing significant implications for providers. The interrelations and interdependencies among these various shifts mean companies face a complex matrix of change. For example, rapid evolution in consumer preferences, and an ongoing shift in the "balance of power" from provider to buyer, are reshaping the relationships among operators, customers, and other participants in the value chain. At the same time, business models are evolving to reflect the new reality and exploit its opportunities. Those changes are taking place against steadily advancing technology, as services that seemed visionary a few years ago become everyday reality.

All this adds up to a redefinition of the communications industry everywhere it operates. In this issue of *Communications Review,* we take a fresh approach by examining two distinct aspects of this global change—first, from the perspective of a particular geographical region, and then from the viewpoint of the customer worldwide.

From the geographical perspective, one market that has experienced unprecedented changes in a short time frame is the Middle East. It is clearly one of the world's most important regions in terms of resources, economics, and geopolitics. But behind the daily headlines, the Middle East is breaking new ground in communications, with exciting developments in the way companies operate across the region and beyond.

In parallel with the dramatic developments in this region, two other major shifts are taking place globally in the relationship between operators and the people who buy their services. The first is in how we target customers; the second is in how we communicate with them. Because customers are no longer a captive audience, operators need to figure out how to identify them, speak to them, and listen to them (to deliver services they want to buy)—and build durable, profitable relationships with them. To investigate these shifts, our final two feature articles examine some emerging techniques and technologies that can help operators target and communicate.

In the first of three articles that examine the fast-evolving communications environment in the Middle East, "A Thriving Market," Ian Sanders provides an overview of the regional market. As the author points out, the past three years have seen massive change, with the issuing of many additional fixed and mobile licenses, and widespread recognition by governments of the economic importance of a competitive telecoms sector. As a result, the region's market offers strong growth opportunities for operators, plus the potential for capabilities developed in domestic markets to be used to fuel overseas expansion.

Our second article, "A Flurry of Activity," builds on the first by examining how increasing liberalization in the Middle Eastern telecom market is creating a surge in M&A activity. Author Philip Shepherd examines a number of trends, including the aggressive move by locally based global operators to buy licenses both within the region and elsewhere. Looking ahead, our author concludes that Middle Eastern operators will continue

to acquire outside the region—and that Western operators ultimately may find themselves targets.

Our third feature article, "Guiding Growth," takes a different angle by examining the development of regulation in the Middle East. Authors Barney Lane and Alastair Macpherson contrast the approach of Middle Eastern regimes, which typically allow only limited numbers of entrants, with those in the European Union, which ensures that licensing is not a barrier to entry. Overall, the authors find that national regulators across the region are working hard—albeit in different ways—to balance the interests of consumers and investors, with positive results for both groups of stakeholders.

Our next two articles turn to our second major theme: the changing ways in which operators target and communicate with customers. In "Targeting the Customer" Ash Bassili and Mariel Diaz examine behavioral targeting—an advertising approach that opens up opportunities for operators to hone their targeting efforts and develop new revenue streams by serving relevant, compelling messages to the right customers, wherever and however they want to receive them. The authors conclude that this approach requires operators to address not only their technology needs, but also their processes and their people.

Next, "Time to Listen" investigates how the phenomenon of consumer conversations is taking traditional communications between operators and customers to a new level. As Deborah Bothun and Jason Wagner point out, customers have found a louder voice in digital media and communities. Also, the shift in market power toward consumers is giving them growing influence on policy and regulation. Operators need to understand how to harness consumer conversations and join the dialogue. And as companies gain consumer insight in real time, the benefits they reap will include speed, agility, focus, and prescience.

Finally, in Perspectives we meet four movers and decision makers in the Middle Eastern communications industry. Senior leaders at Emirates International Telecommunications, Etisalat, Saudi Telecom Company, and Zain Group bring our insights to life by describing ongoing shifts in their businesses—whether in their business models, markets, customers, or regulatory environments.

Sweeping change is now embedded in the DNA of our industry. I believe this issue of *Communications Review* reflects this gene pool by providing industry-leading insights into key shifts facing us all. As ever, we are eager for your feedback to help ensure a relevant and compelling next issue. Whatever comments or suggestions you may have, please send them to me at paul.g.rees@uk.pwc.com or call me on [44] 20 7213 4644.

Paul Rees
Partner
Global Communications Industry Leader
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A Thriving Market

Until fairly recently, the telecom markets across the Middle Eastern region were almost all state-controlled monopolies. In the last three years, governments have recognized the importance of a competitive telecoms sector in enabling wider economic growth. Mobile penetration is high and still growing. Broadband penetration is significantly lower than in other parts of the world, attributed to both supply and demand factors. Growth opportunities are strong for the region's fixed and mobile operators, and the capabilities developed in domestic markets provide a strong base for overseas expansion.

by Ian Sanders

PricewaterhouseCoopers' Middle Eastern region covers 13 vibrant telecom markets from North Africa to the Gulf: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Palestine, Qatar, Saudi Arabia, United Arab Emirates (UAE), and Yemen. This region has a population of more than 179 million, of whom around 36 million reside in the oil-rich Gulf Cooperation Council (GCC) countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE. Egypt is the most populous country in the region, with more than 73 million people; and in the GCC, Saudi Arabia, with more than 24 million people, is the most populous.

Until fairly recently, the telecom markets in these countries were almost all state-controlled monopolies. These monopoly providers had proud engineering cultures and, in some cases, were highly profitable. But they were relatively slow in introducing new services and in lowering pricing—particularly for international calls. Both service quality and retail pricing tended to reflect the lack of competition and the lack of either formal, sector-specific telecom regulation or general competition legislation.

In the last three years, this position has changed significantly as the governments have recognized the importance of a competitive telecoms sector in enabling wider economic development. Second, and in some cases third, mobile licenses have been issued across the region along with a number of new fixed licenses. Associated with that change has been the development in most countries in the region of sector-specific economic regulation for the telecoms sector.

Despite the onset of competition, Middle Eastern operators, particularly in the GCC, continue to be very profitable and have strong balance sheets. In the GCC countries, they also have access to large external sources of equity financing, which are potentially available to fund overseas license bids and acquisitions.

Figure 1: Comparison of mobile markets in the Middle East

Country	GDP (US$billions)	Population (millions)	GDP per capita (US$'000)	Mobile subscribers (millions)	Mobile penetration*
Bahrain	16.89	0.8	22.1	0.9	117.8%
Egypt	127.93	73.6	1.7	23.5	32.0%
Iraq	55.44	27.5	2.0	9.2	33.5%
Jordan	15.70	5.7	2.7	4.5	79.1%
Kuwait	103.37	3.2	32.3	2.6	81.9%
Lebanon	24.00	3.8	6.4	1.1	30.6%
Libya	66.01	6.1	10.8	4.6	74.7%
Oman	40.52	2.6	15.4	2.1	81.2%
Palestine	4.10	3.7	1.1	0.9	24.6%
Qatar	65.81	0.9	70.8	1.1	119.1%
Saudi Arabia	374.46	24.3	15.4	23.9	98.4%
United Arab Emirates	189.64	4.5	42.3	6.5	145.3%
Yemen	22.74	22.3	1.0	3.7	16.8%

*Mobile subscribers as a percentage of the total population

Sources: IMF, World Bank, Global Mobile—Q3 and Q4 2007 data.

Potential for growth characterizes the Middle East, where the rate of mobile penetration ranges from low, in some of the less stable countries, to well over 100%—some of the highest rates in the world.

Market characteristics

The region is characterized by high and still growing mobile penetration, particularly in the politically stable and high-income countries that constitute the GCC *(see Figure 1).* Three GCC countries (Bahrain, Qatar, and the UAE) now have mobile penetration levels well over 100%, which are some of the highest in the world. Conversely, in markets where incomes are lower (e.g., Yemen) and/or there is political instability (e.g., Lebanon), penetration levels are still relatively low—but the potential for growth is considerable. Jordan stands out as a country with high penetration levels relative to per capita GDP, which reflects the success of the Jordanian government in implementing its policies to develop a competitive telecom market.

The economic potential of mobile in emerging markets in the region—even in high-risk markets—was demonstrated by the success of the auction for three national mobile licenses that was run by the Iraqi government late in 2007. The three winning bidders (Zain, AsiaCell, and Korek) each bid US$1.25 billion plus an 18% revenue share.

Whereas mobile penetration is generally high, broadband access penetration is not. With a few exceptions, notably the UAE, the majority of markets in the region have significantly lower broadband penetration than the levels achieved in other parts of the world by countries with comparable levels of per capita GDP *(see Figure 2).*

Low levels of broadband penetration are the result of the complex interaction of supply and demand factors, both of which sector regulation affects. On the supply side, incumbent fixed-line operators in some markets have been slow to roll out ADSL (asymmetric digital subscriber line) broadband across their fixed networks. In some cases that is probably because the configuration of the local access network is unfavorable for ADSL—distance of the customer from the local exchange being the principal limiting factor for successful ADSL deployment. Another factor has been relatively high retail pricing for broadband in much of the region as operators have sought to profit from relatively small numbers of price-inelastic broadband customers.

On the demand side, low PC penetration in some markets limits the addressable market for broadband services. More generally, the "outdoor culture" of many

Middle Eastern countries means that mobile is likely to be a relevant means of accessing news and entertainment services. Another factor is the region's high penetration of satellite television, which both delivers high-quality content in Arabic for family viewing and bypasses the strict restrictions on content that apply in some markets.

The lack of ubiquitous fiber and copper fixed-network infrastructure in much of the region has led sector policy makers and investors to look to wireless broadband access solutions as a means of increasing broadband penetration rapidly and with relatively little capital expenditure. For example, in March 2008, Atheeb Telecom, a new fixed-line operator in Saudi Arabia, announced plans to deploy nationwide a $165 million WiMAX network from Motorola.

While it is still too early to assess the results of these initiatives, WiMAX's emergence as a global 3G technology standard means that it likely will play an important role in the future supply of broadband services. However, the economics of broadband wireless access being no different in the Middle East than elsewhere in the world, WiMAX (and other wireless broadband access technologies) likely will have the most success in markets and regions where the fixed-access network is the least developed. The ambitious plans of Atheeb Telecom—and of companies such as Tata Communications in India and Wateen Telecom in Pakistan—to deploy nationwide wireless broadband access networks using WiMAX illustrate the potential attractions of this technology in emerging markets.

Meanwhile, the development of 3G mobile networks in developed markets in the region, particularly in the GCC, provides an alternative means of rapidly deploying wireless broadband. High-speed packet access (HSPA) 3.5G technology deployed on 3G networks provides broadband access at speeds comparable to all but the fastest fixed-broadband technologies. Already the high-speed downlink packet access (HSDPA) services, the first generation of HSPA, which some mobile operators in the region are offering, provides downlink access speeds of up to 7.2Mbps. That is significantly faster than most ADSL services in the region—although much slower than the advanced ADSL2+ and fiber-based broadband access services that are starting to appear in parts of the GCC.

Figure 2: Comparison of broadband markets in the Middle East

Country	Broadband subscribers ('000)	Broadband penetration*
Bahrain	82.4	10.8%
Egypt	353.3	0.5%
Iraq	N/A**	N/A
Jordan	52.0	0.2%
Kuwait	30.6	1.0%
Lebanon	180.0	4.8%
Libya	N/A	N/A
Oman	8.4	0.3%
Palestine	7.7	0.2%
Qatar	69.0	7.4%
Saudi Arabia	90.0	0.4%
United Arab Emirates	341.9	7.6%
Yemen	15.0	0.1%

*Broadband subscribers as a percentage of the total populuation
**N/A = Not available

Source: Point Topic—2007 Q3 data.

In contrast to mobile penetration, broadband access penetration is generally low in the Middle East, but with a few exceptions.

A related development is the interest that governments and private-sector developers, particularly in the GCC, are showing in the "smart cities" or "cities of the future" concept. Developments based on the concept, which are in various stages of planning and construction in countries across the region, set the standard for future urban living. They strongly emphasize broadband access, using both fiber to the building and a variety of wireless technologies, and provide an interesting testing ground for a range of wireless-enabled applications that use the emerging Near Field Communication (NFC) short-range wireless technologies. The NFC-enabled applications cover areas ranging from micropayments to security and the management of building systems. The cities-of-the-future developments in the region represent a significant opportunity for telecom operators, technology vendors, and systems integrators.

Market liberalization and sector regulation

Markets across the Middle East have opened up to competition. All countries in the region now have at least two mobile operators. In Saudi Arabia and Kuwait, third mobile licenses were auctioned in 2007, following Egypt, which issued a third license to Etisalat in 2006. The remaining countries that have just two mobile licenses, such as Bahrain, Oman, and the UAE, are expected to move toward further mobile licensing in the future.

In parallel with market liberalization has been the development of sector-specific economic regulation of the telecoms sector. Governments across the region have set up telecom regulators with varying degrees of independence from policy makers and from state-controlled operators. The regulatory frameworks embodied in national laws are based on an amalgam of international best price with, for example, the introduction (or planned introduction) in most markets of market dominance provisions,

controls on anti-competitive behavior, cost-based interconnect pricing, and mobile number portability.

In the absence of general competition law and regulation in most countries in the region, the telecoms sector is leading the way in ensuring that consumers receive the benefits from competition and that operators with dominant market positions are not allowed to act anti-competitively. Sector regulators and policy makers are conscious of the trade-offs between aiming for low retail prices and achieving the returns on investment required to support investment in world-class telecom infrastructure. Where dominant operators remain state-controlled, or where the state maintains a significant residual interest, governments also tend to be mindful of protecting the value of their investments.

The growth of mobile

High mobile penetration is a feature of all Middle Eastern markets, including those with relatively low per capita incomes. A number of factors are behind this success, including:

- The undeveloped fixed-line infrastructure in some markets.
- The dynamism of regional mobile operators that have shown the ability to bring the latest mobile technology and services to the region as soon as they become available from the vendors.
- Rapid growth in GDP, particularly recently in the GCC states, as reflected in rising disposable incomes.
- Key demographic group, in that a high proportion of the population in all markets in the region is in the 15–25 age group, which is likely to be the most attracted to mobile services.
- Improving educational standards, which are increasing technology literacy and enthusiasm for the latest mobile devices.
- The region's outdoor culture (people being outside particularly in the hot summer months), which makes mobile phones indispensable for social interaction.
- Large numbers of expatriate workers, particularly in the GCC countries, who rely on mobile phones as their sole means of communication.

The sustained economic growth across most of the region, fuelled most recently by record oil prices, has been a major driver for the growth of mobile. Part of this economic growth has flowed through increased disposable income, which, in turn, increases the addressable market for mobile services in the less developed, lower-income markets and reduces handset replacement cycles in the higher-income markets.

Another outcome of high economic growth, particularly of the boom in construction and infrastructure investment, has been the influx of expatriate workers at all levels. The majority of such workers do not have access to fixed-line telephone services, either at their place of work or at their accommodation, and hence rely solely on mobile voice and messaging services as their means of communicating with family and friends in their home countries. That situation has been an important source of income for operators in the region and has been used to subsidize domestic voice and access services. However, as competition emerges, this area is becoming much less profitable, a trend that has been accelerated by the demise of the international accounting rate regime for international voice.

Another important driver is demographics. The key 15–25 age group makes up a large and growing proportion of the total population—typically 20% or more. This is the age group that is the best educated, the most comfortable with new technology, and the most likely to wish to view online content. It is also the age group that participates the most actively in the region's outdoor culture. Young consumers are also likely to be able to spend a higher proportion of their disposable income on mobile communications and entertainment services than older age groups are.

Voice and messaging are the dominant mobile services in the region. Despite the onset of competition, those services remain very profitable. That is particularly true of international voice, which is an attractive market for mobile operators, especially in the GCC because of the high proportion of foreign workers. International voice margins have been protected in some markets by government restrictions on the use of international VoIP services such as Skype. While these restrictions are unlikely to be effective in the long term, at present they undoubtedly have a positive impact on international voice market share and margins for licensed operators in the markets where they apply.

Non-SMS mobile data services are not yet well developed in most of the region. However, mobile TV, which may offer the best revenue potential of any new mobile service, is now being offered by a number of operators on their 3G networks. These services appear to be popular but have not been marketed actively, apparently because of spectrum capacity constraints.

The DVB-H (digital video broadcast-handheld) standard, however, is likely to be licensed in a number of markets in the near future. As DVB-H technology matures, and mobile handsets enabled by DVB-H become available at competitive prices, mobile TV services probably will take off in popularity. This could become a significant revenue stream for the region's mobile operators.

Access to social networking sites via mobile devices on broadband connections represents another potential growth area for mobile. As mobile emerges as the dominant form of broadband access to the Internet in the region, social networking sites in Arabic likely will be an important driver for mobile Internet take-up, particularly in the younger age groups.

Future opportunities and challenges

For regional operators, domestic markets still offer strong revenue and earnings growth potential. The potential is particularly strong in mobile in the region's less-developed markets, and in broadband, mobile Internet, and mobile TV services in the more developed markets.

The region's former monopoly—and, in some cases, still state-controlled—operators are faced with moving from markets where high-margin international voice revenues and mobile subsidize local-access infrastructure and domestic fixed-line voice services to a new competitive and regulated market. In this new market environment, cross-subsidies are increasingly difficult to sustain, and each business unit must stand on its own feet and deliver returns on invested capital that are appropriate for the level of business risk.

This trend is encouraging regional incumbent operators to look toward overseas expansion as a means of maintaining revenue and earnings growth in line with investors' expectations. Much of this investment by regional operators is in emerging markets in Africa and South Asia. These geographically dispersed investments may have high growth potential, but monitoring and managing their performance is a major challenge.

For mobile operators in developed markets in the region, the challenge is to maintain growth in markets that are at or near full penetration. In these markets, non-SMS data services, including both Internet access and mobile TV, appear to offer the best growth potential. However, the new services require significant capital expenditure and their revenue and returns on investment are uncertain. This problem is no different in the Middle East than in other mobile markets around the world—except that the lack of developed fixed broadband access infrastructure may give mobile and fixed wireless broadband operators the opportunity to secure the broadband market in a way that is unlikely to be possible in markets where the fixed networks are better established.

For fixed-line operators in the region's more developed markets, ADSL-based broadband services offer significant growth potential. Similarly, WiMAX may have an important role in delivering both fixed and, ultimately, mobile broadband services. Another area of growth potential for fixed operators is in corporate network services, which are underdeveloped in most markets in the region.

Sector policy makers and regulators face a challenge. They need to establish and effectively communicate a clear road map for developing the sector that encourages investment and that recognizes the sector's unique position as an enabler both for growth across much of the economy and for e-government.

An area of immediate concern for governments and for operators and their customers is the security and resilience of the backbone networks that connect the region to the global Internet and the global public switched telephony network (PSTN). Concern arose in late January and early February 2008 when, in a series of apparently unrelated incidents, four key undersea fiber optic cable systems connecting the region to Europe and Asia were cut. The affected cables included Flag Europe-Asia and SE-ME-WE 4, the two largest and most modern cables serving the region. Although some backup routings were available, using satellites and the other undersea and land cables, the incident caused considerable disruption and highlighted the limitations of the region's existing international telecom and Internet infrastructure.

We expect that the region's governments, telecom operators, and infrastructure investors, in cooperation with the international undersea cable operators, will soon rise to this challenge. Already investors are starting to evaluate investments in new cable systems, and current planned cable investments are being accelerated.

Conclusion

Overall, the outlook for the telecoms sector in the Middle East is very positive. Growth opportunities are strong for the region's fixed and mobile operators, and the capabilities developed in domestic markets provide a sound base for overseas expansion. The opening of the regional telecom markets to competition has provided attractive opportunities both for cross-border investment within the region and for operators from outside. The investments required are very large, and governments have an important role to play in developing the policies and regulatory regimes required to attract and maintain that investment and to ensure the sector's future success.

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A Flurry of Activity

Intense merger and acquisition (M&A) activity in the Middle Eastern telecom market is being driven by increasing liberalization, particularly in the mobile sector, and surging oil revenues. In 2007, total investments across the region, and those made by Middle Eastern operators internationally, exceeded US$10 billion. As markets continue to allow more competition and operators make significant infrastructure investments, can this pace continue—and where do the opportunities lie?

by Philip Shepherd

Across the Middle East, local telecom operators are embarking on an unprecedented wave of deal activity, both within the region and internationally. And while many of these operators are still relatively small, in terms of subscribers and revenues, a number of major players have staked their claim as significant global players. Middle Eastern operators enjoy considerable financial flexibility with both soaring oil revenues and buoyant stock markets playing their part in filling acquisition war chests. Fast-growing sovereign funds in the region have also fuelled activity, as has the increasing availability of Islamic financing structures.

With competition intensifying throughout the region and a spate of new licenses awarded (driven by World Trade Organization membership requirements), there is little prospect of any immediate slowdown. Indeed, the major regional players—Etisalat, Zain, Orascom, Qtel, and Saudi Telecom—began 2008 in bullish mode. Headline deals so far this year include Orascom's purchase of a mobile license from the North Korean government and Saudi Telecom's acquisition of a 35% stake in Oger Telecom, a Dubai-based operator with substantial businesses in Turkey and South Africa, for US$2.5 billion. Both deals underline the willingness of local operators to invest outside the region, a trend already under way.

Here, we outline the principal drivers behind this active deal landscape and sum up recent activity, as well as look ahead to what is set to be an exciting marketplace throughout 2008 and beyond.

The emergence of Middle East–based global operators

One feature of the Middle Eastern market is also one of the main drivers of the intense merger and acquisition (M&A) deal activity. Emerging recently, over the last three years, a number of locally based global operators have been aggressively buying licenses and operators within the region, as well as in Africa, Southern Europe, and Asia.

Emirates Telecommunications Corporation (Etisalat), the incumbent carrier in the United Arab Emirates (UAE), provides a full range of fixed, mobile, cable TV, and enterprise services. It expects to complete its upgrade to a next-generation network by the end of this year. The company operates in 15 countries—Saudi Arabia, Pakistan, Sudan, Tanzania, Benin, Burkina Faso, Gabon, Togo, Niger, the Central African Republic, Côte d'Ivoire, Afghanistan, Egypt, the UAE, and Nigeria. It also has recently acquired a 16% stake in the Indonesian mobile operator Excelcomindo.

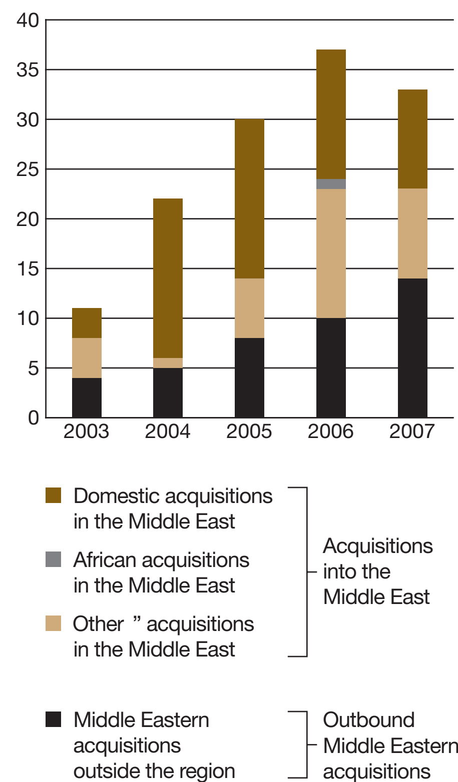
Kuwait-based Zain (formerly Mobile Telecommunications Co., or MTC) was one of the region's first mobile operators when it was launched in 1983. The company was granted a GSM license in Kuwait in 2000 and began offering 3G services in April 2006. By the end of September 2007, Zain had 1.5 million subscribers (a 58% market share) in the country. It now operates in six countries in the region, as well as in Sudan and in 14 other countries in Africa through its subsidiary Celtel International BV. Zain recently acquired Westel in Ghana, bringing its total subscriber base to 45.7 million (as of March 2008).

Egypt-based Orascom operates mobile networks in seven countries—Algeria, Pakistan, Egypt, Tunisia, Bangladesh, Zimbabwe, and Italy. It was awarded the first mobile license in North Korea in January of this year. In Egypt, the company owns a 28.75% stake in Mobinil, which, with 13.7 million subscribers for its GSM-based services as of September 2007, is the country's largest mobile operator. France Telecom is the other major shareholder in Mobinil.

Orascom recently exited the Iraq market, selling its stake in Iraqna to Zain for $1.2 billion after it failed to secure one of the national mobile licenses, which the Iraqi government auctioned at the end of 2007. Weather Investments is an investment vehicle controlled by the Sawiris family, which also controls Orascom. In addition to owning 100% of the Italian operator Wind, in February 2007 Weather Investments announced the purchase of TIM Hellas, a Greek mobile operator, for €3.4 billion.

Saudi Telecom Company (STC), the state-controlled incumbent operator, until recently held the country's fixed-line monopoly. With revenues of $4.55 billion, it is the region's largest carrier by revenue. With around four million fixed lines, STC

Figure 1: Middle Eastern acquisitions: Number of transactions within and outside the region



Acquisitions outside the region by Middle Eastern operators have increased steadily for the last five years.

operates landline services, card phones, public phones, prepaid card services, and business services through its Al Hatif unit, as well as offers Internet services through Saudi Data.

STC was the last of the Middle East's major operators to expand overseas. It invested $3.1 billion in Malaysian operator Maxis Communications in June 2007, and it successfully bid $908 million for Kuwait's third mobile license in November 2007. The company now has operations in Turkey through Oger Telecom, in which it holds a 35% stake, Indonesia, and South Africa as well as Kuwait, Malaysia, and Saudi Arabia. STC's domestic fixed-line monopoly will soon be broken by the arrival of three new consortia that were granted licenses in early 2008—Batelco/Atheeb, Verizon Communications, and PCCW Ltd.

Qatar Telecom (Qtel) holds the country's telecom monopoly, with services covering fixed-line, Internet/data, cable TV, and mobile. The company has been in

expansion mode recently, in anticipation of the end of its monopoly. It acquired Wataniya Telecom in March 2007, and invested $635 million in a partnership with Singapore Technologies Telemedia Pte Ltd in January 2007. Qtel also owns Nawras, the Omani mobile operator, and has a 38% stake in NavLink, a joint venture with AT&T that provides enterprise data services for multinational companies in the Gulf Cooperation Council (GCC) region. Plans have been announced for Qtel's expansion into Morocco, Egypt, and Bahrain. The company is also due to launch services in Jordan and Pakistan through ATCO-Clearwire, a fixed-wireless and broadband joint venture that acquired 75% of Barraq Telecom in early 2008. The Qatar government recently issued a second mobile license to a consortium that includes Vodafone and is expected to issue a new fixed license in 2008.

Deal roundup: Intra-regional and outbound activity

Driven largely by the major players named above, deal activity continued apace in 2007 *(see Figures 1 and 2).* A wave of deregulation, leading to the availability of new licenses, was partly behind this trend. So, too, was the ready availability of financing, due to a combination of high oil revenues, the increasing strength of sovereign funds (highlighted by Dubai Holdings' acquisition of Tunis Telecom), and buoyant stock market conditions.

Acquisitions in the Middle East by companies from Russia, North America, and the United Kingdom boosted activity in 2006; however, acquisitions in the region from those countries fell marginally in 2007, although the average deal size continued to rise (part of this can be explained by the fact that fewer deals were disclosed, accounting for some of the decline in value terms). Stripping out the effect of the one-off acquisition in the Middle East by the South African operator MTN Group, the value of deals in 2007 was up compared to 2006. That increase was driven by a number of large domestic deals.

2007 also saw a further increase in the number of transactions carried out by Middle Eastern telecom operators outside of the Middle East and Africa region. However, the falling average deal size meant that the value of Middle Eastern out-of-region acquisitions fell.

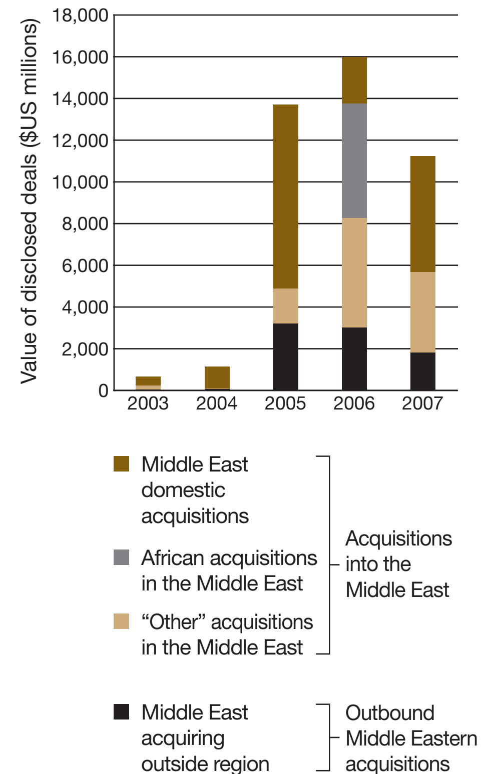
The major players lost little time bidding for the new licenses that were put out to tender. This resulted in a number of headline deals, including Zain's acquisition (in a consortium with Saudi investors) of the third mobile license from the Saudi government for $6.1 billion; Vodafone Egypt's 100% acquisition of a 15-year 3G license from the Egyptian government; and STC's acquisition of 26% of the third mobile license from the Kuwaiti government for $908 million. Preceding those deals were Etisalat's aggressive bidding in 2006 for the second Saudi mobile license, as well as its 100% acquisition of the Egyptian 3G license and 100% acquisition of the fourth mobile license from the Afghan government.

The Middle East is still a two-tier market. The GCC-based operators have been the most active *(see Figure 3),* with STC increasingly willing to invest both in and outside the region (as evidenced by its share acquisition in Oger). Smaller operators in the region have been attempting to catch up. For instance, Batelco recently took a 96% stake in Jordanian mobile operator Umniah and a 20% stake in Sabafon, a mobile operator in Yemen. But there continues to be a significant divide in the market, in which the smaller operators struggle to match the valuations of the major players.

This disparity in valuations has been a major cause of the intra-regional consolidation experienced to date (as well as a barrier to entry for most western operators—the exceptions being Vodafone's successful bid for the second Qatari license and MTN's acquisition of Investcom for $5.5 billion). A number of examples of intra-regional consolidation were seen in 2006 and 2007. Recent deals include Qtel's acquisition from Kuwaiti Projects of a 51% stake in NMTC (Wataniya) and Orascom's 100% acquisition of Raya Holdings in Egypt.

There has also been no shortage of investment outside the region by the major operators. Qtel has been active in Pakistan, acquiring a 75% stake in Barraq Telecom, the Pakistan-based wireless broadband provider, and in Cambodia/Laos (following QTel Asia Mobile's acquisition of a 49% stake in Shenington Investments). Meanwhile, Saudi Telecom invested $3.1 billion in Binariang, owner of the Malaysian fixed

Figure 2: Middle Eastern acquisitions: Value within and outside the region, 2003–2007



M&A deals—within the region as well as those by Middle Eastern operators acquiring outside the region—continued to be strong in 2007.

and mobile operator Maxis. Other outbound deals included Zain's stake in WESTEL for $120 million and Etisalat's 20% stake in the West African operator Atlantique Telecom.

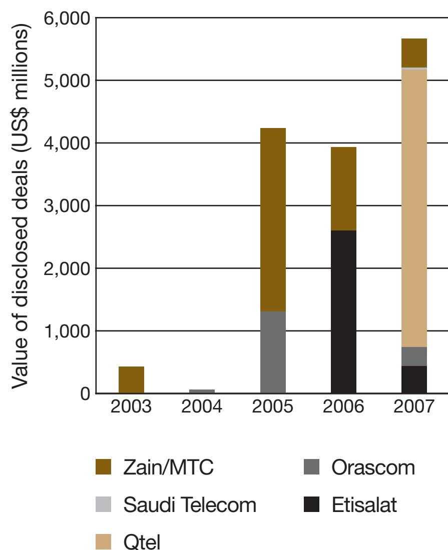
The region's appetite for risk

Two substantial markets in the region—Iran and Iraq—are some distance behind the curve. Both have huge potential, but both also harbor significant risks.

Iran's mobile phone users exceeded its fixed-line subscriptions for the first time during Q2 2007, reaching more than 20 million, or 30% penetration, among its two national and three regional mobile operators. The country is poised to increase mobile competition still further this year, having announced plans to award two more national mobile licenses, as well as to partially privatize Telecommunication Company of Iran (TCI), the sole provider of fixed-line services in Iran.

Meanwhile, although Iraq's telecom infrastructure has been ravaged by war

Figure 3: Acquisitions by major Middle Eastern operators, 2003–2007



Operators in the Gulf Cooperation Council countries have been increasingly active in M&A deals in recent years, while the smaller Middle Eastern operators have been attempting to catch up.

and sanctions, mobile penetration has continued to grow; the country now has more than 10 million mobile phone users (out of its total population of 27.5 million). In August 2007, the Iraqi government auctioned off three 15-year mobile licenses for a total of $3.75 billion, replacing the short-term contracts awarded after the invasion in 2003.

The way in which regional Middle Eastern operators have addressed the Iraqi market highlights the difference in risk appetite between these players and their western counterparts—in particular, their greater willingness to adopt a long-term approach to investments in emerging situations. Although there has been no rush to invest, two significant deals stand out in this respect. The first is Zain's acquisition from Orascom of 100% of Iraqna Telecom (for $1.2 billion in December 2007) and the second is the successful bid by Zain's subsidiary, MTC-Atheer, to secure one of the three 15-year mobile licenses auctioned in Iraq.

Looking ahead

A recent report by the research company Proleads indicates that the six GCC countries—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates—together will invest as much as $375 billion in telecom and related infrastructure during the next 10 years. The trend, already established, for Middle Eastern operators to acquire outside the region looks set to continue, although there has been a slowdown (however temporary) in these companies' preparedness to invest in Africa.

Interest in African-based mobile providers likely will continue, giving weight to the theory that wireless services provide the most economic method of growing telecoms in less-developed and rural regions. Deals in the African telecoms services sector should also pick up momentum, as government-owned incumbents continue to sell stakes in these businesses.

However, regional operators face a number of challenges. In particular, the fact that Middle Eastern governments still hold substantial stakes, direct and indirect, in many markets is a major issue. Politicized by these stakes, overseas expansion often complicates what otherwise would be straightforward investment decisions. Where they already do business, these operators must achieve a viable balance between their desire to maintain the value of telecom investments and the need to provide cheap, high-quality services that support wider economic objectives—not always an easy line to tread.

Other challenges include addressing the ongoing decline in mobile average revenue per user, caused by the increasing number of mobile SIMs (subscriber identity modules), and identifying ways in which data revenues can be increased. In addition, fixed-voice penetration and revenues are declining, due mainly to mobile-to-fixed substitution, escalating competition, and VoIP (voice over Internet Protocol). Going forward, international rates and revenues are set to fall further, and operators will need to counteract the effect this has on their profitability. And, lastly, recent connectivity outages (caused by breaks in undersea cable systems) need to be remedied.

These challenges notwithstanding, opportunities for western operators to invest in the region may well remain limited for some time to come. The premium valuations of local companies, combined with their ready access to liquidity, look set to provide them with strong competitive advantage, particularly at a time when licenses are coming to market at such high prices. Indeed, in the current environment—as major Middle Eastern operators look ever further afield—western operators may find themselves increasingly likely to become targets.

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Guiding Growth

Countries across the Middle East have liberalized their markets in hopes that competition will result in lower prices, more choice, greater investment, and improved quality of service. In consequence, Middle Eastern telecom markets are seeing rapid rates of expansion and developing complex regulatory regimes. Understanding the local policy and regulatory environment is critical for investors to maximize their returns on investments while pursuing growth opportunities across the region.

by Barney Lane and Alastair Macpherson

Reflecting the growing importance of the communications sector to a country's overall economic and social well-being—as well as being required to meet the conditions for World Trade Organization accession—countries across the Middle East have liberalized their telecommunication markets. They wanted to increase competition in the hope that lower prices, more choice, greater investment, and improved service quality would result. In consequence, Middle Eastern telecom markets are seeing rapid rates of expansion. International players are taking note, evaluating them as potential opportunities for investment.

In common with telecom liberalization programs around the world, Middle Eastern countries have developed complex regulatory regimes in order to create the underlying conditions for competitors to enter and to curb exclusionary behavior by entrenched monopolies. Investors need to understand the regulatory framework for two main reasons:

1. Regulation affects the potential returns on investment through its influence on the cost of market entry; competitive risk from future entry; the degree to which players compete on price or other differentiating factors; the level of infrastructure investment required to gain a foothold in the market; and the extent to which incumbent players will be constrained in their attempts to thwart competition from new entrants.

2. Existing players within the market need to understand regulation in detail in order to understand which competitive strategies will and will not work, and to be able to make compelling public interest arguments to the authorities to change the rules. While it is always true to say that investors must be sure they understand the local political and regulatory environment, it is particularly true in the Middle East, where procedures for obtaining licenses tend to lie more in the political realm than they do, for example, in Europe and North America.

When comparing the regulatory regimes in the Middle East with those in other parts of the world, observers will notice many substantial differences. In particular, there are stark contrasts between Middle Eastern and European Union regulatory regimes. In the latter, the defining features are an explicit commitment to "technological neutrality" and the exclusion of licensing as a barrier to entry (except where necessary to allocate scarce resources). In contrast, Middle Eastern regimes are typically far less liberal and many allow only limited numbers of entrants.

Differences in the business environment are also substantial. Middle Eastern markets, which typically feature low—and in some cases declining—fixed-line penetration, low computer penetration, low Internet usage, and rapidly growing mobile penetration, differ from the much more nearly saturated markets of Western Europe and North America. As such, the Middle East is similar in some respects to a number of Eastern European markets, which also have been experiencing rapidly growing mobile penetration and high rates of fixed-to-mobile substitution.

Given the diversity of economic conditions and regulatory systems across the region, it is difficult to generalize regarding Middle Eastern regulatory or business environments. However, Figure 1 highlights some of the factors that most Middle Eastern countries have in common.

Figure 1: Business and regulatory environments in the Middle East

Market	Regulation
High and rapidly growing mobile penetration	High license fees in both the fixed and mobile sectors
Low and static or gradually declining fixed penetration	High investment and coverage obligations for new entrants
High rates of fixed-to-mobile substitution	Temporary roaming arrangements to accelerate national coverage
Relatively concentrated mobile sector	License-based entry and limited licenses available
Limited competitive entry in the fixed sector	Regional infrastructure obligations in the fixed sector
Low Internet and broadband penetration	Local loop unbundling seen as the predominant model for competitive access (exceptions: Bahrain, Jordan)
Limited and low-quality fixed infrastructure	A generally cautious approach to liberalization
High rates of economic growth driven by the boom in oil revenues, but substantial disparities in income distribution	Government controls over Internet use

Sources: IMF, World Bank, Global Mobile—Q3 and Q4 2007 data.

Most Middle Eastern countries have some market conditions and regulations in common despite the considerable diversity of economies and regulatory systems across the region.

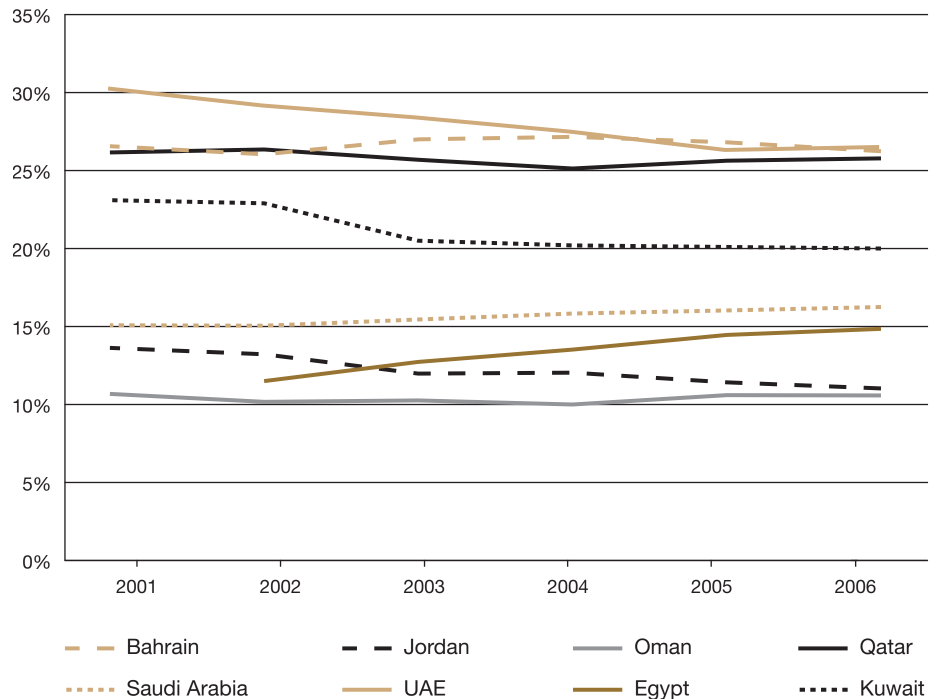
The (admittedly generalized) features of regulation in the Middle East have an important consequence: In most markets, entry typically is very capital intensive and involves significant sunk costs. High license fees for both fixed and mobile concessions, combined with extensive investment obligations, result in significant entry costs. In the fixed market, the reliance on own-infrastructure build and local loop unbundling (LLU) rather than less capital-intensive forms of access, such as wholesale DSL and bitstream access, further increases the cost of and the risk involved in market entry.

Bitstream access is the term used to describe a means by which a market entrant without local access infrastructure can provide broadband Internet to

customers using the incumbent's facilities. It differs from the more familiar LLU in that the connection between the incumbent's and the new entrant's network is electronic rather than physical and requires less investment in infrastructure by the new entrant.

From the incumbent's point of view, the limited number of licenses available and the slow pace of competitive entry—combined with the capital-intensive requirements for entry—allow them a degree of confidence that heavy infrastructure investment costs will be recoverable, thereby encouraging such investment in the first place. From the new entrant's point of view, the limited number of licenses reduces the risk of future competitive entry, again creating space to recover sunk investments. On the negative side, however, the lack of wholesale products, such as carrier pre-selection (CPS), wholesale DSL, and bitstream, makes the entry process riskier and prevents entrants from expanding as fast as they otherwise would.

Figure 2: Fixed-line penetration rates in selected Middle Eastern countries



Sources: ITU, PriMetrica, PricewaterhouseCoopers' analysis.

The rates of fixed-line penetration are low throughout the Middle East, partly as a result of the wide disparities in income distribution that leave rural areas lacking in infrastructure compared to the cities.

Market and regulatory developments

Fixed telephony

As stated earlier, most Middle Eastern markets are characterized by low rates of fixed penetration and low Internet penetration *(see Figure 2).* This is partly the result of relatively low per capita GDPs (in some countries) and very wide disparities in income distribution. Typically, large cities are well covered by fixed infrastructure, but that is less true in rural areas. Egypt is an exception, in that fixed penetration rates have been strongly increasing.

While Egypt is an exception in terms of market structure, Bahrain and Jordan are major outliers in regulation. Jordan currently eschews the common practice in the Middle East of limiting the number of licenses. Furthermore, competitors access their customers by using the less capital-intensive CPS rather than via own-infrastructure build and LLU. In Bahrain, a relatively large number of fixed operators have entered the market, and they typically use CPS to access their customers.

In Bahrain and Jordan, therefore, entry is less risky, which allows entrants to expand more rapidly. Ultimately, however, they will remain more dependent on the incumbent than in other jurisdictions. Long-term profits are likely to be lower in these markets, and entrants—absent other regulatory measures—are unlikely to find it profitable to invest in infrastructure in currently unserved areas. Additionally, incumbents suffer more acutely and immediately as a result of competitors entering the market and thus will factor in a greater degree of competitive and regulatory risk when evaluating the business case for new infrastructure investment.

A summary of the key regulatory developments in the **fixed telephony sector** in selected Middle Eastern markets is given below:

- **Bahrain.** Bahrain became the first Gulf state with a fully liberalized telecoms sector in July 2004. Competition focused initially on international services following entry by Mena Telecom, Digi Connect, 2Connect, Kalaam Telecom, and Zain Bahrain. Five operators have launched international CPS since it was launched in 2004. Licensees must be local entities (but may be owned by foreign investors) and must locate "substantial activity" in Bahrain.

  In 2006, Zain Bahrain and Mena Telecom paid BHD5.5 million (US$14.6 million) and BHD4.5 million ($11.9 million), respectively, for national fixed wireless service concessions. They are required to launch by June 2008 and cover 40% of the population, with that figure rising to 100% in four years.

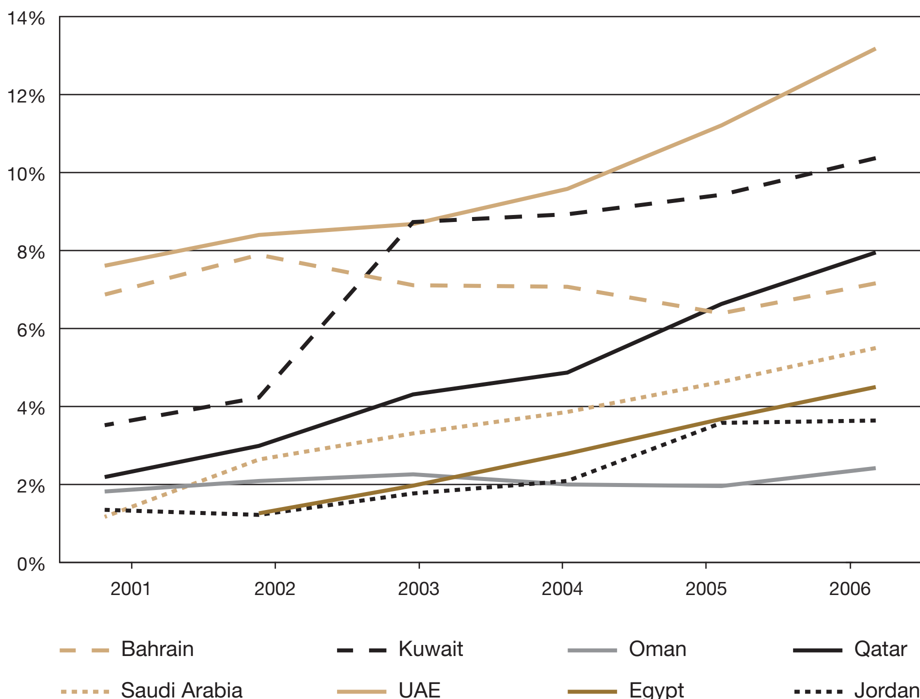
- **Egypt.** Although the fixed market was officially liberalized in 2005, competition did not materialize following the minister's decision that a second operator is unlikely to be licensed before mid-2008. The National Telecom Regulatory Authority was expected to license two international gateway operators in 2006, but the process was delayed.

- **Jordan.** The Telecommunications Regulatory Commission (TRC) awarded the first concessions to alternative providers in April 2005. One type of concession allows entrants to rebrand

incumbents' services, marketing them as their own. The TRC places no restrictions on either the number of licenses or the technology employed by licensees. By October 2007, 9 individual and 29 class licenses had been approved.

- **Kuwait.** The number of fixed lines is expanding, though more slowly than the population. The market has yet to be liberalized and the incumbent telecom operator, run by the Ministry of Communications, retains 100% of the market share. Liberalization is generally considered to be some way off.
- **Oman.** The Telecommunications Regulatory Authority (TRA) initially aimed to introduce competition in the fixed sector by 2004, but that deadline was pushed back. In 2004, the TRA published a strategy for liberalization that included licensing new fixed and mobile operators and establishing a universal service fund. In March 2007, the government announced that a new fixed concession would be issued by the end of that year. However, following a more recent change in policy, the government is now considering issuing a second national license based on a combination of fixed wireline infrastructure and wireless local loop (WLL).
- **Saudi Arabia.** The government approved liberalization in 2002; and in May 2003, it announced plans to open the industry to foreign investment, starting with the mobile market in 2004 and the fixed sector in 2008. However, not until 2007 were three licenses issued to Verizon/Millicom, PCCW, and Batelco. The incumbent, Saudi Telecom, pays relatively high fees to the government—approximately 20% of revenues.
- **United Arab Emirates.** The UAE was relatively late in opening up its telecom market and in developing telecom regulation. The sector was officially opened to competition in April 2004, and full liberalization is not expected until 2015. Du, the new entrant, was granted a full-service license in February 2006 and launched national CPS in July 2007. Prior to the award of the full-service license, it already provided infrastructure-based fixed telecom, Internet, and TV services in the "New Dubai" area.

Figure 3: Internet penetration rates in selected Middle Eastern countries



Sources: ITU, PriMetrica, PricewaterhouseCoopers' analysis.

Internet penetration is low in the Middle East, partly because of the low levels of fixed lines.

Internet and broadband

To understand the Internet and broadband markets, distinguishing between Internet service—provided by the Internet service providers (ISPs)—and Internet access—provided by local infrastructure operators, usually the incumbent—is important. It is reasonably common in the Middle East for end users to purchase "access" from the incumbent, over which they can select the ISP of their choice.

As LLU and bitstream access become ubiquitous, it will become more common for ISPs to purchase access on a wholesale basis from the incumbent, and customers will obtain Internet service and access from a single source. Most Middle Eastern markets are liberalized insofar as several ISPs operate in the region. For example, more than 200 ISPs operate in Egypt and more than 50 in Saudi Arabia.

ISP markets in the Middle East also involve high degrees of governmental control over content. From the user and the operator perspectives, this control has the important consequence of government-operated content filters causing quality-of-service bottlenecks, which can result in very slow speeds during periods of heavy usage. The service problem is worsened by the fact that the organizations responsible for controlling and filtering content have so far resisted entering into service level agreements with their clients (the ISPs). And as usage and access bandwidths have increased, server capacity on the content filters has failed to keep pace.

Internet penetration (defined as the number of Internet connections as a percentage of the population) in selected countries is shown in Figure 3. It is worth noting that Internet penetration underestimates true Internet usage, which is much higher because many users without access at home use public terminals (for example, Internet cafés). But penetration across the region is low, which is itself partly the result of the low levels of fixed-line penetration.

Competition has yet to reach the Internet in several Middle Eastern markets. Omantel is the only licensed ISP in Oman. In the UAE, LLU is yet to be

formally launched, following a protracted dispute between Etisalat, the incumbent, and Du. Saudi Arabia has yet to launch LLU.

In markets where LLU is—or is expected to become—the predominant means of competitive access, becoming established as a new entrant will be a challenge because of the high degree of sunk costs required for entry, particularly if the entrants have to build their own backhaul networks rather than lease backhaul from established operators. However, the Egyptian story, in which LLU take-up increased significantly following regulatory action to reduce prices and simplify processes, demonstrates that LLU can be a success with the right level of proactive involvement by the regulator.

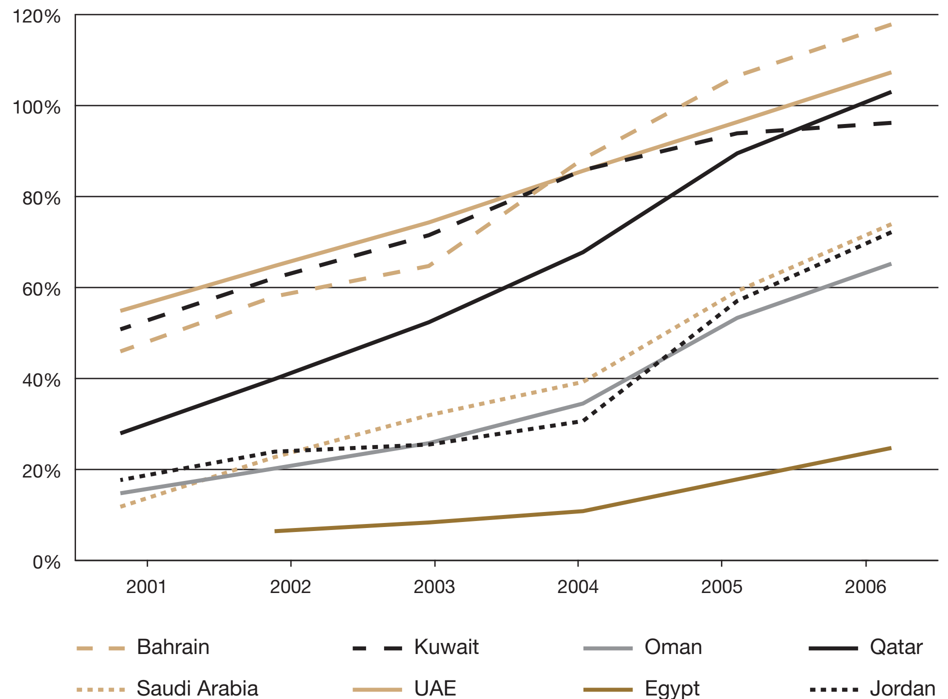
Mirroring their regulators' approach in fixed voice telephony, Bahrain and Jordan have so far eschewed LLU in favor of the less capital-intensive, and hence less risky, bitstream access as the primary means of securing competitive access.

A summary of the key regulatory conditions and developments relating to the **Internet access market** is provided below:

- **Bahrain.** Since 2006, Batelco has been required to offer bitstream access and the resale product "wholesale DSL" to its broadband competitors, but not LLU. The TRA is currently considering whether to introduce LLU. Broadband penetration is very low, given the country's per capita GDP, which some have attributed to lack of choice and high prices resulting from a legislative framework that favors the former monopoly. Although there are almost 30 ISPs, Batelco's market share was still greater than 90% in 2007 with broadband penetration below 10%.

- **Egypt.** At the end of 2006, there were 214 licensed ISPs and four were permitted to operate an Internet backbone. LLU was introduced in 2003 but was rendered ineffective by inefficient processes and high prices. The market currently is dominated by TE Data, EgyNet, and LINKdotNET. A major spur for growth was the "broadband initiative" introduced by the government in May 2004, which simplified LLU processes and reduced basic retail DSL tariffs by 50%.

Figure 4: Mobile penetration rates in selected Middle Eastern countries



Sources: ITU, PriMetrica, PricewaterhouseCoopers' analysis.

Mobile penetration is increasing rapidly across the Middle East and is exceeding fixed-line penetration in most countries.

- **Jordan.** In 2004, the TRC began examining the possibility of introducing LLU. In 2005, the regulator ruled that Jordan Telecom would be obliged to provide bitstream unbundling to entrants at cost-based rates.

- **Kuwait.** Currently, four main players offer broadband Internet in Kuwait using xDSL technology, although the Ministry of Communications holds the majority of the market. LLU and bit-stream have yet to be implemented.

- **Oman.** Omantel currently is the only licensed ISP.

- **Saudi Arabia.** The state oversees the Internet sector. Currently, 50 licensed ISPs provide dial-up and DSL services over STC's infrastructure. No plans have been unveiled regarding LLU.

- **UAE.** LLU has yet to be launched despite Etisalat and Du signing an agreement that grants access to one another's networks. The TRA is mediating a dispute between Etisalat and Du regarding access to each other's local loops.

The mobile market

As demonstrated in Figure 4, mobile penetration is skyrocketing across the region, exceeding fixed penetration in most countries. Relative to many international markets, Middle Eastern markets are highly concentrated (a high proportion of the market is held by the largest one or two players; exceptions are Jordan and Egypt) and have slow rates of market entry resulting from a very cautious approach to issuing new licenses.

Similar to fixed markets across the region, entry typically is very capital intensive due to the practice of using auctions to award licenses. For example, the third license in Egypt was sold to Etisalat for $2.9 billion, and Zain (MTC) paid $6.11 billion for the third license in Saudi Arabia. Also, complying with extensive coverage obligations requires high investment. The high investment requirements, however, are somewhat ameliorated by roaming agreements (e.g., in the UAE) that allow the new operator to roam on the network of an existing operator pending the develop-ment of its own network.

continues on next page

A summary of the key regulatory conditions and developments relating to the **mobile access market** is provided below:

- **Bahrain.** Batelco's monopoly ended in 2003 when Zain Bahrain was awarded GSM and 3G licenses. Until 2006, Zain experienced rapid growth at the expense of Batelco, following its earlier adoption of advanced data services. A comprehensive review of the mobile market is expected to result in a new license auction sometime in 2008 with the aim of improving price competition.

- **Egypt.** In 2006, the National Telecom Regulatory Authority (NTRA) selected a consortium led by Etisalat as winner of the tender for a third mobile license after it bid EGP16.7 billion ($2.93 billion). In 2007, NTRA sold 3G licenses to the existing operators, MobiNil and Vodafone, for 20% of the sum paid by the third mobile licensee.

- **Jordan.** The wireless market has been competitive since September 2000, when Orange Jordan became the first challenger to Zain Jordan, which had enjoyed a monopoly since 1995. In 2004, Xpress was issued a concession to provide private mobile radio services using the iDEN standard, which were launched later that year. A third GSM license was awarded later, in August 2004, to Umniah, which rolled out GSM services in 2005.

- **Kuwait.** Zain Kuwait and Wataniya Telecom enjoy a duopoly in the mobile telephony market (with circa 55% and 45% market share, respectively). The government holds stakes in both companies. STC was announced as the winner of a third license in November 2007 and is expected to launch service in the second half of 2008.

- **Oman.** In early 2005, a new license was awarded to Nawras for OMR40 million ($143 million), at 80 times the cost of Oman Mobile's license plus 12% of the gross annual revenues in royalties. The license has various conditions relating to service standards and for a proportion of employees to be Omani nationals. Following this, Nawras and Oman Mobile were granted a three-year exclusivity period.

- **Saudi Arabia.** In 2004, international telecom operators were invited to bid for a GSM license, but bidders were required to partner with at least five local companies. Etisalat emerged as the winner with a bid of SAR12.21 billion ($3.26 billion). Trading as Mobily, Etisalat paid a further $200 million to gain a national 3G license in August 2004, with a UMTS concession also being granted to STC in July 2005. In March 2007, Zain (MTC) won a third license with a bid of SAR22.91 billion ($6.11 billion).

- **UAE.** Etisalat held a monopoly on mobile telephony until 2004 when the government responded to pressure from the international community and local business groups to liberalize the market. Du was granted a full-service license in 2006, for AED124.5 million ($33.9 million), giving it the right to offer GSM and 3G services. The TRA threatened sanctions if services were not available within a year of the award of Du's license. Commercial cellular services arrived in February 2007.

  The TRA has stated that the arrival of a third operator is "inevitable" and confirmed that it would not be open to foreign bidders. The market does not yet have mobile number portability, and the tying of handsets to a particular network is prohibited. Etisalat and Du reached an agreement in 2007 that allows Du to roam for 12 months on Etisalat's network in areas not covered by Du.

Challenges ahead

What does this mean for investment in the region? As noted earlier, in the Middle East it is particularly important for investors to understand the local policy and regulatory environment, as many of the crucial decisions that have a bearing on returns on investment lie in the policy and regulatory domains.

The opportunities and threats facing any investor in the region depend on its position in the market and its business strategy. The cautious pace at which licenses are issued means that new opportunities are few and far between. When opportunities do arise, they are likely to be attractive since the threat from further new entry is low.

The exceptions are Bahrain and Jordan, which have adopted a more liberal approach. Consequently, Bahrain and Jordan are more attractive to operators that favor smaller scale and lower-risk strategies. However, the downside is that such markets, arguably, are less profitable in the long run. From the point of view of incumbent fixed operators, the relatively slow pace of liberalization seen in many Middle Eastern countries allows them greater certainty of earning returns on substantial infrastructure investments.

All players in the region should consider whether the current regulatory arrangements are sustainable, as well as the level of risk posed by future regulatory change. Liberalization is still in its infancy in many markets. So what is the chance that, in time, the systems will converge with more evolved regulatory regimes existing in other parts of the world, such as the European Union? Ultimately, this should depend on the strength of the public policy arguments for change versus the status quo.

An important weakness of European communications regulation is the one-size-fits-all approach that covers a wide range of markets with fundamentally differing characteristics. European regulation has been undeniably successful at introducing competition into the more developed markets of the West. But it has been arguably less successful in the markets of Central and Eastern Europe, in which—like in the Middle East—the more urgent need is investment in and expansion of fixed network infrastructure.

Given this context, there appear to be strong arguments for maintaining policies, such as exist in several Middle Eastern countries, directed specifically toward encouraging and promoting investment in new infrastructure. Further, in the case of Jordan, which has perhaps one of the most European-like regulatory systems in the Middle East, the need to improve and expand the fixed infrastructure is among the most acute in the region. That factor may lead to pressure for change.

In the mobile sector, rising incomes, rapid growth in demand, and the increased adoption of advanced data services lead to many viewing the sector as attractive. But the practice of using auctions to allocate licenses has resulted in extraordinarily high fees, which may well wipe out the potential for substantial profits. Meanwhile, the absence of secondary trading mechanisms for licenses and spectrum makes market entry risky.

The extent of this risk, however, depends partly on how the regulator treats mobile interconnection and on whether regulators allow the operators to recover their license fees in regulated interconnection charges. The case is strong for allowing them to do so, particularly if governments wish to encourage future investment.

Overall, regulators across the region are working to find the right balance between encouraging competition in the interest of consumers and encouraging the investment required to support the modern telecom services that are important in enabling wider economic development. This balance is being struck differently in different markets across the Middle East, but the pattern that is emerging is positive for investors and consumers alike.

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Targeting the Customer

In a fragmented world—one where devices and channels are proliferating, and consumers' time and attention are increasingly elusive—it is vital for communications companies to understand the changes in their customers' behaviors and lifestyles. The headlong growth in online advertising is now making behavioral understanding even more critical, with consumers expecting personalized, targeted services and messages that reflect their own individual tastes and lifestyles. Online behavior is the single biggest indicator of users' wants and needs, and behavioral targeting technologies have now emerged that enable companies to identify and track how people behave online and to serve them with relevant advertising. Operators who become early adopters of behavioral targeting have the opportunity to open up several potential revenue streams and to boost returns on their overall advertising investment.

by Ash Bassili and Mariel Diaz

Picture the scene. It is six o'clock in the morning in Sydney, Australia, and you are awoken by your Internet clock radio playing a music station streamed from the United States. While getting dressed, you switch on the TV for news, check your mobile for e-mails and SMS messages that have come in overnight, and go onto the Internet to find out what the weather will be like. Then you go to the office and stay online all day, switching between your desktop PC and your Internet-enabled mobile as you rush between meetings.

Sound familiar? It should. As the proliferation of digital technology continues, consumers worldwide are shifting away from traditional media—TV, print, radio—toward new media that give them a more interactive and personalized experience. At the same time, Web 2.0 technologies have democratized the Internet, with consumers becoming producers and publishers of information through blogs, chat forums, and media-sharing Web sites for photos, videos, and music. This trend is being accelerated by new media channels—mobile phones, MP3 players, DVRs—and is creating new opportunities to interact with customers.

The rising importance of relevance

This wave of change is also affecting the way people consume traditional media. TV viewers are "channel surfing" more often, skipping ads on their personal video recorders, and generally becoming less engaged with the advertising they are exposed to. Research shows that consumers are increasingly cynical toward advertising, placing greater trust in the advice of other members of their communities than in advertisers' own messages.

The result? To retain consumers' attention, advertisers now need to understand their target consumers and be more relevant to them than ever before. The net result will be rapid growth in digital advertising, both online and mobile, with advertising spending in traditional mass media declining. According to the Australian Audit Bureau, online advertising spending in Australia surged by 61.5% in 2006 alone. And looking further ahead across the world, the *PwC Global Entertainment and Media Outlook 2007–2011* forecast that Internet advertising would grow at a compound annual rate of 18.3% between 2007 and 2011, taking it to US$73 billion in 2011—meaning that Internet advertising will account for 14% of the global advertising market.

In other words, the migration to online advertising has only just begun. Over the coming years, organizations that welcome and embrace this new era of advertising will open up a range of hard business benefits through three important drivers of competitive advantage:

1. Greater knowledge of individual customers' behavior and consumption patterns.

2. A differentiated ability to use this knowledge to better serve the needs of customers.

3. Improved measurement and accountability, underpinned by an enhanced ability to track and increase the return on investment (ROI) from advertising.

The implications for communications companies

What does all this mean for communications operators? Put simply, it creates new vistas of opportunity for building value, provided that operators take the right steps now. Essentially, all operators—both fixed and mobile—need to fundamentally rethink and reshape their approach to online and mobile advertising in light of the behavioral changes under way. Only by doing so will they be able to take full advantage of their assets and access to consumers, thereby opening the way to increased advertising ROI and a range of new and potentially lucrative revenue streams.

A key tool for realizing those benefits in the evolving online advertising environment is behavioral targeting—the set of technologies and techniques described on page 35. As that information shows, in today's increasingly competitive communications marketplace, behavioral targeting is becoming a critical organizational capability for communications operators seeking to drive greater advertising ROI.

As the online advertising market evolves and expands, behavioral targeting offers communications operators several different opportunities to increase their revenues. We will examine each of these routes to value later in this article, but first we will explain some of the underlying mechanics and dynamics of online advertising.

Understanding the online advertising value chain

The five key parties involved in the advertising value chain are advertisers, ad networks, Web site owners, media sales operations (which buy ad space on behalf of advertisers), and consumers. For communications companies seeking opportunities in behavioral targeting, the first three participants are the most relevant. However, it is important to note that their three roles are not necessarily mutually exclusive. For example, one company—whether a communications operator or some other type of business—can simultaneously be both an advertiser and a Web site owner, or both a Web site owner and an ad network.

Advertisers

Advertisers are driving the headlong growth of digital online and mobile advertising because results have shown that it delivers. The key issue for advertisers is to achieve a high response—whether measured by click-through rate or some other metric—and ultimately a high conversion rate, which means the advertisement results in an action such as a sale or an agreement to take a call for further information. Advertisers can achieve higher click-through rates by placing their advertisements on Web pages that their targeted customers visit, aligning the creative content of the ad to their audience and ensuring that the offer is compelling enough to make a potential customer react by clicking through the advertisement.

If an advertiser is also a Web site owner, it can advertise on its own site and other Web sites to increase the flow of new visitors coming to its sites, and encourage users to purchase its products or services. For instance, a telco might target promotional offers for new bundled voice over Internet Protocol (VoIP) and mobile services to users who are also heavy users of VoIP and mobility.

Ad networks

The role of the ad network is to manage the advertising inventory for a portfolio of Web sites, with the aim of maximizing the revenue gained from each available ad space. This involves negotiating with media buyers. The ad network can sell its ad inventory for a premium price by demonstrating its ability to achieve higher click-through rates and conversion rates for the advertisers.

Ad networks achieve higher click-through rates and conversions by serving the ad in more places and/or by ensuring that the ad is served to the right consumer at the right time and in the right place. Therefore, the bigger an ad network is (the more Web sites it manages), the greater its potential to serve ads in a more targeted fashion and the more attractive it becomes to potential advertisers. An ad network's ability to identify a third-party advertiser's targeted consumers across a network of, say, 60 Web sites gives advertisers a compelling reason to advertise on an ad network in preference to individual Web sites—which may serve ads simply in rotation or, at best, based on the context of the page. Prominent ad networks include the search engines Advertising.com and MediaSmart, and a number of publications such as the *Financial Times* and *The Wall Street Journal* also run online ad networks.

Web site owners

Generally speaking, Web sites appeal to particular demographics or market segments. Web sites that have spare space may elect to use this space for advertisements, often to up-sell or cross-sell their own products or services. Some Web site owners choose to delegate the management of their ad inventory to ad networks. Additionally,

What is behavioral targeting?

Behavioral targeting is a collection of technologies, tools, and techniques that enable an organization to serve advertisements to users based on their previous online behavior—including purchases, searches, pages viewed, forms completed, and their comments on forums and blogs, in e-mails, and so on. This approach maximizes the ads' relevance to the customer, thereby boosting the potential response rate and financial return.

The focus on actual behavior differentiates behavioral targeting from the various other forms of targeting that are used to increase the relevance of online ads. Those forms include:

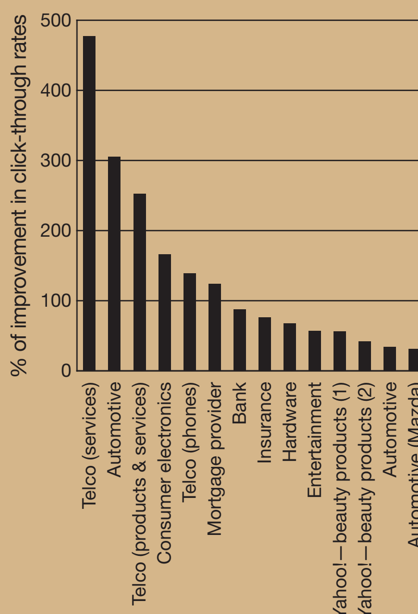
- Contextual targeting, based on the content of the site.
- Time/day targeting, such as breakfast, lunch, and holidays.
- Location targeting, either for mobile advertising or to fixed users within a local area.
- Demographic/segment targeting, which relies on the greater likelihood that a message will be relevant to a particular segment.

For an organization to serve ads according to the location, demographic, and/or segment of a user, it needs to identify the user through a log-on or IP address that it can then use as a unique identifier.

Despite the effectiveness of these forms of targeting, experience shows that online behavior is the single biggest indicator of users' wants and needs. Recent research gives an indication of the effectiveness of behavioral targeting in engaging customers and capturing their attention. In 2007, Yahoo! in the United Kingdom and Ireland conducted a study on click-through rates for online ads *(see the first figure)*. Significantly, the highest increase was achieved by ads for telco services.

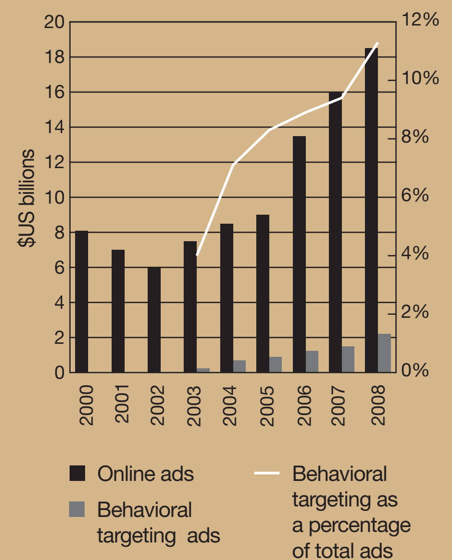
This increase in click-through rates can in turn lead to higher sales conversions and greater ROI. Given such statistics, it is hardly surprising that rapid growth is under way in the proportion of online and mobile advertising based on behavioral targeting *(see the figure below)*. Meanwhile, research by Forrester shows that 52% of marketers are now actively using behavioral targeting, with a further 17% testing it and the remaining 31% intending to use it during the coming year.

Behavioral targeting in ads as used by various industries



Source: Yahoo! UK & Ireland.

Growth of behavioral targeting in US online advertising



Source: eMarketer.com.

Some recent successful behavioral targeting projects

The voice over Internet Protocol (VoIP) provider Vonage ran a campaign through the ad network Advertising.com to generate new subscribers to its VoIP calling plans. In four months, Vonage's monthly rate of new consumers increased by 172%. This increase is attributed to Advertising.com's AdLearn optimization technology, which uses behavior, geography, hour, creative, Web site, and other criteria to determine optimal ad placement.

The Japan-based communications operator NTT DoCoMo ran a campaign through ft.com to try two methodologies—behavioral targeting and run-of-site—on a series of brand metrics. The behavioral targeting results across the various brand metrics ranged from an uplift over run-of-site of approximately 40% to nearly 200%.

they can become ad networks themselves by selling their space (and possibly that of other sites) to third parties, if they have the scale and traffic to do so.

In addition to maximizing their ad revenues, Web site owners have other goals, such as enhancing the customer experience to encourage repeat visits to their Web sites, increasing new visits to their sites, and enticing customers to purchase their products and services. To enhance the customer experience, Web site owners often focus on improving the usability of their sites and personalizing the content of their sites for each user via individual portals.

The opportunities

By the nature of their business model and the pivotal role they play in the broadband world, communications operators are well positioned to take up any or all of the three roles highlighted above—advertiser, ad network, and/or Web site owner. The highly competitive communications marketplace in which they operate means they invariably spend heavily on advertising. At the same time, they have access to a mass of customer relationship management data (much of it behavioral); own compelling, high-profile Web sites that often generate high traffic; and play an important role as carriers in delivering advertising on behalf of various third parties over their fixed-line and mobile networks.

We at PricewaterhouseCoopers (PwC) are currently working with a number of communications operators and media companies pioneering the use of behavioral targeting techniques and enabling technologies in all three roles. This hands-on experience has given us deep insight into both the opportunities and the challenges facing organizations embarking on this journey, as well as the strategic and tactical considerations involved in building or accessing behavioral targeting capabilities.

Each role in the value chain brings different priorities in the search for value, reflecting the three main ways in which behavioral targeting can help communications companies generate higher revenues: first, as an advertiser, by implementing or using ad-servers enhanced with behavioral targeting capabilities to cross-sell and up-sell products and services; second, by building an ad network that uses behavioral targeting to optimize performance and sales rates; and third, as a Web site owner, by using behavioral targeting and monitoring traffic on its own site so it can sell its ad space at a premium.

Different roles, different strategies

When acting as advertisers in the value chain, communications operators need to seek out advertising opportunities—whether via their own sites, third-party sites, or ad networks—that give them broad reach into defined segments and the ability to understand which segments have the highest and most valuable response rates. By combining customer relationship management data with online behavior, the operator can drill down to the right consumers and maximize the relevance of each advertisement, thereby boosting the potential click-through rate and conversions. Two recent successful advertising campaigns that used behavioral targeting are described at left.

When acting as an ad network, a communications operator should focus on how the network can align advertisers with specific customer segments, help them target their message accurately through the various channels that the infrastructure can serve, and ensure that an easy-to-use testing and reporting framework is in place to enable creative content to be updated on a tactical basis. This in turn requires specific skills and technology capabilities in these areas. Behavioral targeting will help optimize ad performance and thereby increase the rates that advertisers will bear. An example of a successful ad network—MediaSmart, in Australia—is described on page 38.

As a Web site owner, a communications operator can apply its own specific segmentation and behavioral targeting capabilities to help it cross-sell and up-sell its products and services. To support such efforts, its testing and reporting framework will concentrate on tracking the relative success of different offers in generating extra sales. Communications operators that are Web site owners can also generate extra revenue by selling advertising space on their site—either directly or managed by an ad network—and enabling third-party advertisers to benefit from the same segmentation and behavioral targeting capabilities. Most communications operators will be both a Web site owner and an advertiser, enabling them to achieve dual benefits from advanced online targeting capabilities.

While the routes to value are different, the consistent core requirement for successful behavioral targeting is an understanding of how to deliver more targeted advertising to specific customers via a range of existing and new channels. One aspect of that is to serve more personalized ads that will resonate with customers because the ads are more relevant to them. For example, if a user has been identified as someone who downloads music and ring tones, ads can be served to that consumer about downloading music to Internet-enabled phones.

Communications companies are also pursuing multichannel strategies to engage with their targeted customers across all the channels they are using. If a communications company is trying to attract young people to subscribe to a new service, banner ads on social networking sites may be the most effective way to reach the targeted segment. Internet advertising—underpinned by behavioral targeting—can then be used in conjunction with traditional campaigns, such as TV, to drive brand awareness and sales.

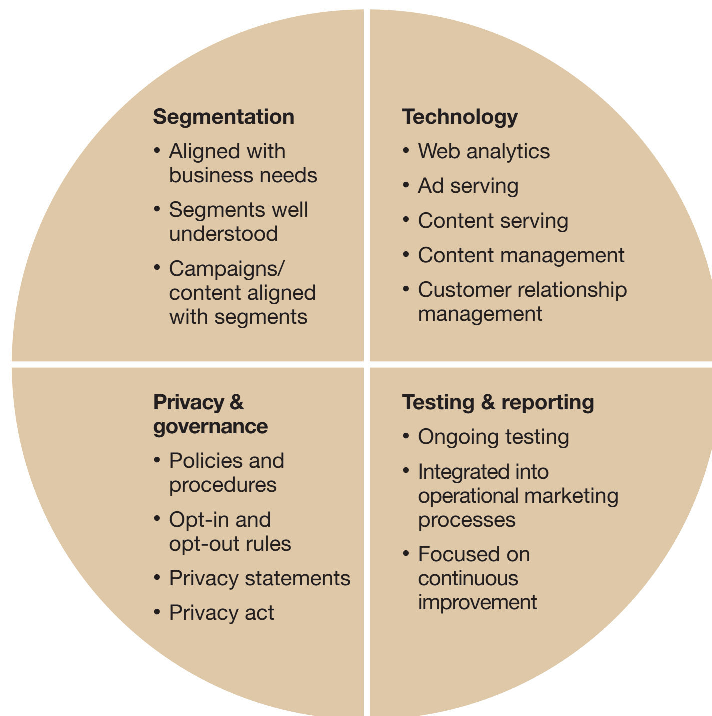
Challenges along the way

Inevitably, communications operators encounter hurdles they must cross before they can plan and implement a successful behavioral targeting program. One is that executing such a program demands an understanding of both the consumer's purchasing life cycle and segmentation, as well as the ability to translate this behavioral history into meaningful campaigns and services for the customer. Such translation requires flexible and integrated systems that can blend, aggregate, and analyze data from various sources and feed it into the product development process.

A further challenge, which we touched on earlier, is that while several Web analytics and behavioral targeting packages are available in the marketplace, they do not remove the need for the creative marketing and analytical skills required to fully realize the benefits of these technologies. An important attribute is understanding how best to integrate these packaged technologies into the company's wider advertising value chain, organizational structure, and business processes.

PwC's experience also highlights additional practical considerations for successfully using behavioral targeting. As well as laying the foundations for continually learning about customers, organizations embarking on behavioral targeting also need to give those same customers a degree of control over the information that can be obtained and used about them for advertising purposes. Giving control means going beyond the privacy and legal requirements to focus on building a long-term, mutually trusting relationship with customers.

Figure 1: Implementing digital advertising: Four key capabilities



Source: PricewaterhouseCoopers' analysis.

To successfully implement behavioral targeting in online advertising, a communications operator must achieve capability in and carefully align four key areas of the effort.

Four key capabilities

Regardless of the role or roles that a communications operator takes on in the digital advertising value chain, our experience shows that four key areas need to be aligned to successfully implement behavioral targeting:

1. **Understanding of the targeted customer segments.** To engage its customers and target advertisements effectively, a communications operator needs a solid understanding of the segments it serves and the specific needs, desires, and preferences of each. The ability to understand the behaviors of these segments across digital media, regardless of channel preference, and to connect to the right segments through creative messaging, is vital. Operators looking to exploit behavioral targeting must ensure that this is a core competence of their marketing department and must evaluate it regularly through customer feedback and focus groups.

2. **Understanding of privacy and legal/regulatory considerations.** An operator must have a good understanding of the relevant privacy and legal concepts, whether self-imposed or industry- or government-regulated. For example, privacy regulations in most countries prevent communications companies that collect, handle, and retain personal information about their customers from disclosing the information to third parties without the permission of their customers. These regulatory constraints can become an issue internally when different divisions within an organization are competing for the same advertising real estate. It may be worthwhile to establish an enterprise-wide governance framework for resolving such conflicts.

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MediaSmart: An ad network in action

The Australian MediaSmart advertising network manages more than 40 Web sites, including sites such as Lastminute.com, Yellow, Telstra, BigPond, Vogue, Disney, TradingPost, Whereis, and Cricket Australia. MediaSmart's technology and the size of its network mean it can, for example, track users who are searching for a particular make and model of car on TradingPost (a car sales/classified site) and researching it on Redbook (a car valuation site). It can then display the car maker's ad to that user not only on TradingPost and Redbook but also on other seemingly unrelated Web sites, such as the information-sharing site Egoli, whose ads are also managed by MediaSmart.

3. **A multichannel advertising and content-serving infrastructure.** A communications operator's behavioral-targeting-enabled marketing mix must have an underlying infrastructure that supports tracking and serving users across channels. Over the past 18 months, more than $12 billion has been spent globally on acquisitions in the digital advertising arena, notably by Microsoft with its acquisition of Aquantive. Google has also been focusing on this area, with its acquisition of Doubleclick and the introduction of Open Social. Operators competing in the online advertising space, whether as Web site owners or advertising networks, need to understand how to best integrate such new technologies into their own environments or evaluate the pros and cons of outsourcing this capability entirely.

4. **A comprehensive test-and-learn framework.** It is important for operators to develop a solid testing framework that builds learning into the operational processes and enables continually improving the way advertising and content are targeted to users. This requires experienced practitioners who can design and execute A/B type tests—unleashing two versions of a design, to observe which works best—and who can evaluate both the creative and the commercial impact of the behavioral targeting techniques. Our experience points to the following approach:

   - Clearly define the baseline current state from the outset, and use it as a control against which to assess the effects of the test configurations.
   - Make only one change at a time to the configuration—enabling the revenue impact or the change in the click-through rate that results from one particular modification to be isolated and identified.
   - Run test and control simultaneously to be sure they are subject to the same conditions, such as traffic patterns.
   - Test iteratively—repeating and refining the methodology and the process to maximize what is learned.

A structured approach to developing a road map for action

To develop behavioral targeting capabilities that drive measurable results, an operator will require a structured, customer-centric approach that addresses organizational, technological, and skills requirements in a holistic fashion. Crucially, before embarking on its implementation of behavioral targeting, the organization needs to have clear answers to all of the following questions:

- What is our multichannel marketing strategy?
- What is our role in the advertising value chain?
- What and where—across organizational structure, advertising value chain, business processes, skills, and enabling technologies—are our capabilities and gaps?
- What is our road map—including organizational design, third-party integration, governance, ad-serving technologies, and test-and-learn paradigms and reporting framework—for achieving the targeted, end-state capabilities and supporting infrastructure?

As organizations embark on the road to personalized online advertising, they need a firm grasp of their target segments and the evolving complexities of their chosen roles in the advertising value chain. Effective targeting, then, is a journey and cannot be achieved simply by plugging in a behavioral targeting package. In order to respond effectively to the new advertising era, communications operators need to address their processes and people issues as well as their technology needs. Only then can they serve relevant, compelling messages to the right customers, wherever and however they want to receive them.

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Time to Listen

Today, consumers have found strength in numbers. The community is now the consumer. Socialization has dramatically reduced the barriers to group communication and organization. These changes are a huge source of risk for companies that now watch missteps spread through an entire universe of critics, fans, and self-appointed journalists, many of whom are not customers. It is also one of the single greatest business opportunities in consumer-facing business. Communications operators that listen to and act quickly on consumer conversations will be able to differentiate and lead the market.

by Deborah Bothun and Jason Wagner

Imagine that it's seven o'clock on a Monday morning. You turn on your computer. On the screen is a startling level of insight into the real-time attitudes, behaviors, and intentions of your consumers. By knowing why people buy, you know where markets are going. This insight informs every decision you make as an organization. Every hour of every day, you are able to solve performance problems before they become financial problems, and your customers help you innovate well in advance of demand.

That very Monday morning is coming. In billions of chats, blogs, e-mails, phone calls, and social networks, consumers are talking about your business. Somewhere in this massive conversation are shouts and whispers that will determine your success or failure. What can you do when the volume and speed of the conversation and its rapid development as a market force have strained your ability to keep pace?

For the first time, methodologies and technologies exist that can interpret unfiltered, real-time, digital consumer conversations. These dialogues contain a granular, forward-looking understanding of consumer attitudes, needs, and behaviors. And they can be combined with other existing behavioral and transactional information (such as Web-surfing patterns and point-of-sale data) to create a completely new and previously unattainable view of your markets. To realize this potential, companies need to do more than collect and analyze data. Maximizing the value of consumer conversation is a matter of organizational as well as technological change.

Adjusting to new methodologies and technologies will require time, trial, and investment, but the benefits will be absolutely enormous. Already companies can use real-time consumer feedback to improve products, sales targeting, segmentation, customer service, and crisis management. Those that merge disparate channels of consumer data and embed them into operations will also discover the missing links between buying history and buying intention. Executives will hear consumers whispering about new and expanded markets and react to these shifts "ahead of the curve," realizing faster sales growth, reduced risk, more efficiency, and higher customer retention.

In telecoms, competitive pricing and competition within the last mile due to technology advancements mean that it is more important than ever to differentiate based on meeting customers' needs through innovative solutions and leading customer service. Communications operators that listen to and act quickly on consumer conversations will be able to differentiate and lead the market.

Conversation is the new source of consumer intelligence

Consumers are leading a massive, global conversation about products, services, and companies. Today, there are approximately 75 to 100 million blogs and 10 to 20 million Internet discussion boards and forums in the English language. Consumers use online media, phone calls, e-mails, chats, and text messages to discuss what, when, and how they buy. And consumers, not marketers, lead the discussion.

Consumers expect their interactions with marketing and sales to approximate one-on-one attention ever more closely. At the same time, companies are looking for models to address the needs of individual consumers without a one-to-few workforce—i.e., to build flexibility and configurability into commodity products and services, as well as monitor customer experiences to drive customization.

It has become increasingly clear that traditional customer segmentations (based on, for example, age, gender, income, and historical transactions) are no longer flexible enough to represent today's consumer behaviors. Companies need to listen directly to what their markets and individual consumers demand, when (and sometimes before) they demand it. Consumer conversation provides a way forward. The gathering and analysis of digital consumer conversation dramatically enhances traditional consumer intelligence through real-time speed, the granularity of individual opinions, leading indicators, unfiltered sentiment, and cross-channel integration.

The number of discussions about a customer-facing company—its brands, reputation, and competitors—can reach into the thousands, conceivably millions, per day. This level of speed and scale is humanly impossible to monitor in real time. Companies need to develop the technical capability to gather consumer conversation and then filter it for concepts that will help them identify shouts (obvious red flags) and whispers (patterns of interest with uncertain meaning that need further investigation). A multitude of service providers and technologies can help build such a system. They often specialize in a particular type of information, such as call center recordings, internal documents, e-mails, and free-form text fields (e.g., in databases), or in blogs, message boards, and news. Tools for video analysis are new but are becoming more common.

Service providers also offer customer data integration systems for merging conversational analysis with existing transactional and behavioral data. PricewaterhouseCoopers believes that the integration of conversation with other behavioral and transactional consumer information ultimately will provide the greatest benefits to companies.

The market is ready

A great deal of investment and innovation is occurring in technologies that translate vast amounts of free-form, "unstructured" consumer conversation into metrics and indicators. This activity verifies that the technical functionality necessary for analyzing consumer conversation is a rapidly maturing business and will continue to fuel even greater capabilities, which will lead to better insight and decision making.

As measured by US patents, innovation in customer analytics and customer-centric technology increased sevenfold over the last nine years. In the last four years (including PricewaterhouseCoopers' estimate for the full year of 2007), the number of patents in these areas increased 125%, compared to a gradual decline of 1.9% in the overall number of patents during the same period. Investors have backed this innovation by buying up a great number of start-up businesses related to customer analytics, demon-

strating that the analyst and venture capital community believes in the value these tools can provide. As a result, according to our analysis, the buyout level in customer analytics is now close to the level of a mature technology such as XML, XBRL, and supply chain management.

As the related technologies and services mature, executives are investing in customer analytics in order to address their concerns that their knowledge of customers is inadequate for the global economy. The Economist Intelligence Unit's *CEO Briefing: Corporate Priorities for 2007 and Beyond* surveyed 1,006 global executives in 2007. The survey found that the number-one area to which respondents expected to commit new investment was marketing and sales; that 74% of respondents said their companies would become more tightly integrated with key customers over the next three years; and that the biggest challenge to running a successful global company was understanding customers in multiple territories.

Translating conversation into action

The explosion of consumer conversation allows consumers to rapidly self-organize across geographical borders in order to express constantly evolving needs. This has changed the rules of business. Consumers now expect rapid responses to their immediate desires, and they have the power to demand what they want. Companies can combine these real-time, individual attitudes with other sources of consumer information and apply the insight directly to product development.

In the food and beverage industry, for example, The Coca-Cola Company has used the analysis of consumer conversation, in combination with traditional market research, to create and market new products for changing taste profiles. By analyzing consumer conversation, the company realized that words such as *diet* and *light* produced a markedly negative reaction among certain demographics. By understanding the nuances of words in conversations (and the behavior that necessarily stood behind them), Coca-Cola was able to recognize that there was a portion of the population that would in fact want a diet beverage if it wasn't labeled as such. Hence, the birth of Coke Zero.

Coke Zero represented a huge departure for The Coca-Cola Company, whose traditional model was blanketing massive volumes of product to customers who all wanted the same thing—e.g., Coke Classic or Diet Coke. Coke Zero was designed to target that specific segment of consumers who want low-calorie beverages but are averse to diet products—i.e., males. Coca-Cola found that Hispanic males are large regular cola drinkers and not generally considered diet soda drinkers; however, this group over-indexed by 124% on Coke Zero 24-packs.

Technological change is not enough

Data integration cannot be achieved through technological change alone. It will require substantial investment in business processes and personnel structures, as well as in information technology. Such an undertaking is significant, but it is the road down which companies must travel in order to realize the full benefits of consumer conversation.

Executives must learn to translate consumer voices rapidly into company strategy, and then push the resulting insight across traditional organizational boundaries—up the chain of command, across business lines, and throughout the value chain. Companies are struggling with those kinds of organizational changes, facing challenges not only in developing the right systems and people to analyze consumer conversation but also in responding quickly enough to analysis.

First, it is difficult to find employees who are qualified to manage the collecting and interpreting of consumer conversation so as to provide clear directions for action. Data and analysis that indicate purchase intent, for example, remain elusive for many. In order to address the skill-set issue, David Mahder, senior VP, strategy, marketing, and consumer insights at Aetna, believes that incorporating people with marketing and market research skills into companies in all industries will become imperative. "Our organization has already hired many individuals who are external to health insurance, and that's going to become more and more important."

Even with the right people in place, which department should own and drive this evolving business area is not clear since, operationally, it spans several functions. Siloed data systems, multiple sales channels, mergers and acquisitions, competition among sales units, and the different incentives of sales and marketing have fostered a feudal mentality within many organizations.

Embed the customer in your organization

PricewaterhouseCoopers believes that the benefits to companies that "embed" consumer voices are so great that they are likely to disrupt markets. Across most industries, from retail to entertainment to financial services, we believe that profound changes will occur as businesses organize around the deeper understanding of consumer behavior achieved when conversation is combined with traditional data sources. Companies that prepare themselves for these changes will reduce risk and will produce new and expanded markets, faster sales growth, greater efficiency, and higher customer retention.

In the pages that follow, we identify the technological, organizational, and process improvements that can help companies use consumer conversation to realize the immediate benefits and full potential of consumer-centric business.

Ask the big questions

Some large corporations—particularly in consumer-oriented, technology-savvy industries such as entertainment and media, telecommunications, and consumer goods—are taking steps toward distilling actionable intelligence from the torrent of consumer-generated buzz. But most companies still understand the consumer based on historic trailing indicators, such as transaction histories, focus groups, surveys, and data purchased

Using consumer conversation to innovate

Many companies still rely on a 20th-century view of product development: Use historical and transactional information to create new products and then tell the world. This model is neither immediate nor continual enough to keep pace with today's consumers. Companies need a real-time window on changing consumer behavior. By engaging in a continual dialogue with consumers before products are launched, companies can gain the benefits of new markets and new ideas and reduce the risk of product failures.

Organizations also need to break down internal walls in order to unlock value from individual consumer data sources. Sales units, for example, rely heavily on transactional data, which is used to measure the quotas that determine bonuses. Their incentive is to "sell," not fill databases with qualitative information. Most marketing departments, on the other hand, believe that rich behavioral profiles provide their firm's competitive edge.

"The speed at which the blogosphere operates will act as a catalyst for responding to issues faster, which requires sharing information within the company more efficiently," explained Sprint Nextel's Sean Doherty, manager, interactive communications. Sprint Nextel is gathering and analyzing consumer voices in order to improve its sales, customer service, communications, and product development functions. Its goal is to shorten the time it takes to gather consumer sentiment, and then use software tools to diagnose product issues in real time. Sprint Nextel hopes to provide customers with software patches and technical assistance before influential blogs such as The Boy Genius Report turn technical problems into ones of reputation.

from third parties (e.g., panel data). However, regardless of their levels of maturity in using consumer conversation, most companies will benefit from defining (or refining) their strategy for how they will utilize digital conversations to drive the business.

How can executives determine whether consumer conversation can inform, empower, and help execute the company's strategy around connectivity with the consumer? Start by asking the big questions. For example, what major challenges does your company face with regard to growth, competition, and industry trends? Could any of those challenges be informed by a real-time window on unfiltered consumer attitudes, behaviors, and intentions? Which functions or business units will be the most central to your competitive advantage in the coming year? Would a closer relationship between consumers and your segmentation, crisis management, product development, marketing, or selling strategies significantly improve this advantage?

The questions will be different for each company, but the theme is clear: Where would a view of consumer behavior and sentiment that is closer, faster, more granular, cross-channel, and forward-looking provide the most positive impact to your business? Once a company determines where to apply consumer conversation, it needs a listening post (a service or internal process for gathering and analyzing conversation) and a process owner. Whether the VP of operations, head of sales, chief customer officer, chief marketer, head of communications, or a manager, that process owner will be charged with identifying the data sources, services, and technologies that can aggregate and analyze consumer conversation in order to meet strategic goals.

Pursue the best opportunities for short-term benefits

In order to operationalize knowledge gained from consumer voices, companies must find consumer conversations that will solve specific problems and deliver value. Often companies seek to respond more quickly to new product launches, competitive threats, or events that negatively affect their reputations. Analyzing real-time activity in blogs and on message boards and comparing it with traditional news channels can help companies better anticipate and more quickly respond to public opinion and consumer needs. The result can be better margins, a stronger brand, and reduced crisis management costs.

Competitive mysteries can also provide quick wins for sales, marketing, and customer service. Questions such as why complaints are spiking in the call centers or why a competitor's product better meets consumer needs can be investigated by analyzing e-mail, call center transcripts, and the Web. One of the most significant advantages of the new tools on the market is the ability to analyze a huge amount of data to find consumer voices that otherwise would escape notice. Based on such information, companies can make well-informed responses with higher rates of success.

The systematic use of consumer conversation in one functional unit will need buy-in from executive-level management in order to spread beyond its initial silo. Executives can begin to foster an environment in which rapid and informed responses to consumer trends are a core philosophy. They can also champion a cross-functional team to plan the merger of consumer data across business units, identify areas in each unit where the consumer voice can add value immediately, and set specific qualitative and quantitative parameters for evaluating performance.

At this stage, chief information officers need to create plans for a secure data and technology infrastructure that can interoperate with existing, and future, customer relationship management (CRM) applications, analytical software, and reporting packages. CIOs also will help to determine which software tools or service providers will supply data mining and analysis, how best to manage the technology costs, and what elements of conversation processing can be safely outsourced.

Create a consumer intelligence unit

Some companies have begun to create a meaningful conversation with consumers and, in the process, have developed a better understanding of consumer needs and more granular customer segmentation. The insight from consumer conversation

may be applied across more than one function (e.g., sales, marketing, communications, and product development) so that the company can react to early warnings of adverse issues quickly enough to lessen their financial impacts. Through better targeting of and communication with consumers, and through increased cross-selling, companies also achieve higher sales.

The next step is to use conversational insight to drive the company's business model and corporate strategy. To do this, companies must tear down internal silos. A "consumer intelligence unit" is one mechanism that can do the job. Supported by the COO, a consumer intelligence unit can bring together various silos in order to agree on the types of consumer analyses that will benefit various functional units and departments. For example, marketers and salespeople must work together to narrow the divide between "touchy-feely" behavioral segmentation and traditional demographics and to track key account data and manage campaigns with near real-time speed.

It is important that the COO help departments set specific goals for aligning the entire organization to a corporate philosophy of listening and responding to consumers. Then business units and functions will be motivated to spend time and effort cooperating on standards of data collection and analysis. The consumer intelligence unit can use these standards to manage third-party service providers or in-house efforts that capture information from blogs, social networking, and other new media, in order to ensure that they add value to multiple functions.

As their commitment to data mining and analysis grows, companies will also need CIOs who can augment data-warehousing capabilities to keep up with the ever-mounting volume of information. As silos fall, the CIO must follow with centralized data and a road map for at-a-glance dashboards that make merged consumer information useful to all business units.

Continually improve operations according to real-time insight

Companies have begun to evolve toward the bright Monday when they will have an unprecedented understanding of consumers and the ability to use that knowledge throughout their organizations in real time. Avinash Kaushik, a leading authority on Web analytics and author of the well-known blog Occam's Razor, said, "Mining consumer conversation for business intelligence will be mainstream among large companies in three to four years." PricewaterhouseCoopers believes that the most highly evolved companies will merge consumer voices with other channels of consumer information in order to produce a granular, forward-looking, real-time, and unfiltered view of their customers. The benefits of this process will be huge.

Speed. Companies that embed integrated consumer intelligence will continually improve performance based on a real-time stream of insight from internal and external sources. Executives will hear the shouts of their customers as soon as they reach online media, mobile devices, phone calls, video, and whatever new forms of digital communications emerge in the future.

Agility. Technology will play a key role in enabling the operations of the highly evolved, consumer-centric company. The CRM environment will incorporate merged consumer insight, and dashboards will be standard. Integrated consumer intelligence will rest at the fingertips of all appropriate employees, enabling them to swiftly improve and develop products and services. Some components of data collection and analysis will be outsourced, but we believe that core data gathering and management will be supported centrally. In fact, mining conversation will be more economical and rapid in most cases than will outsourcing traditional market analysis.

Focus. Tight consumer alignment will help sharpen business focus and the allocation of personnel and resources. All divisions of the organization will recognize the importance of external input from consumers, and this philosophy will be an accepted method of driving business models and innovation. Consumer-centric metrics will influence employee performance reviews, development plans, and compensation. These changes will result in improved customer service and higher customer satisfaction.

Prescience. Academic research has already demonstrated the significant benefits of merging disparate streams of behavioral, attitudinal, and transactional data in order to achieve a more complete picture of the consumer. PricewaterhouseCoopers believes that consumer conversation will add foresight to this list of benefits. The ability to identify and analyze consumer whispers creates a remarkable potential to look into the future. A company that anticipates emerging issues and trends ahead of the media and competitors will be able to reach the consumer base with the right products and messages for each phase of the business cycle, yielding a more meaningful relationship that will improve revenue by increasing customer retention. Advertising will follow suit with more targeted, relevant, and timely communications—and incredibly detailed, granular segmentations will drive new products and growth in new markets.

Where do you start? Ask the big questions.

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Perspectives

The Middle East is breaking new ground in communications, with exciting developments in the way companies operate across the region and beyond. The opening of markets to competition is forcing incumbents in the region to look for new ways to attract and keep customers and drive growth, while new market entrants look for ways to lure customers with new offerings as mobile penetration rates soar and broadband is slowly taking off.

In the following interviews, we talk with four leaders of major players in the Middle Eastern telecom market who represent different histories, markets, business models, and expansion strategies. Their opinions and outlooks offer some interesting insights as to where this market is headed.

An Interview with Deepak Padmanabhan, Emirates International Telecommunications

Founded in 2006, EIT is the international telecom investment arm of TECOM Investments and Dubai Investment Group. In its short life, the company has already made investments across the telecom value chain in Europe and North Africa. Here, CEO Deepak Padmanabhan talks about the company's unique approach to investing in developed and developing markets, EIT's active management style, and future opportunities in the sector.

Communications Review: What was the impetus for creating EIT?

Padmanabhan: TECOM—an operating company of Dubai Holding that manages free zones and has investments in telecom, media, education, and biotechnology. In 2004–2005, TECOM was looking at investing outside of Dubai, specifically in the telecoms sector. TECOM had gathered significant telecom experience during the establishment of Dubai Internet City and subsequently Du, the second operator in the UAE [United Arab Emirates].

Dubai Investment Group, which is one of the financial investment arms of Dubai Holding, expressed interest in supporting the initiative. Our in-depth knowledge of the sector made it attractive for Dubai Investment Group. EIT was established neither as a pure financial investment company nor as an operator of operators.

Investors in the telecommunications sector typically adopt one of three models: pure financial investments, strategic investments, or operational investments. We adopted a fourth, which is the "active management model"—a hybrid of the strategic and operational models. It combines investment experience with in-depth sector knowledge, assisting the management of the operating companies in key areas.

TECOM Investments is a 58% shareholder of EIT while Dubai Investment Group holds 42%. The main focus of EIT is to make fundamentally strong, medium- to long-term investments across the telecom value chain.

Communications Review: How do you go about determining what investments to make, and how do you manage them?

Padmanabhan: EIT has established a unique operating model, which is reviewed, modified, and fine-tuned year after year. The active management model essentially addresses three areas: 1) investing in fundamentally strong assets across the telecom value chain; 2) developing unique strategies to distinguish investments in developing countries and developed economies; and 3) having the ability to identify key value drivers—be they financial, commercial, technical, or people related—that would enhance the value of these investments.

We understand also that synergies will play a critical role in our investments, but that does not form part of our investment criteria. EIT does not invest in greenfield opportunities. It strategically built its competencies in turning around incumbents and in its ability to identify key value drivers in order to support the transformation of the organization.

Investment is a core process for EIT and is fairly sophisticated. A multiple-gating concept ensures that the investment is reviewed and evaluated through multiple criteria and in adherence to our governance model. Most investment opportunities come to us through our relationship with the banking community. Apart from that, we have investment professionals who pride themselves on identifying fundamentally strong and differentiated assets.

Communications Review: Can you explain your active management model?

Padmanabhan: Our operations are based on the active management model. The ability to actively manage the company is a critical criterion when evaluating an opportunity. Active management entails the ability to instill competent leadership in the company, participate in key decision-making processes, and support the organization in key areas. Active management also involves our participation in planning, performance monitoring, supporting core functions, and developing synergies.

The active management model also entails putting a value-creation team on the ground. The value-creation team consists of senior professionals who do not necessarily get involved in operations but support the organization from the outside. The value-creation team can also seek external assistance in driving the value-creation levers. The team does not have to be in every country of our operation, but we do need value-creation resources by cluster. Hence, you will see that currently there is one value-creation team overseeing our investments, which are predominantly in the Mediterranean region.

An important tool in our active management model is the introduction of a knowledge management system. This system will allow us to gather information from our operating companies and subsidiaries to form a collective, shared-knowledge database that will enable more efficient decision making and value creation across the group.

Our solution provides a document management system and collaboration tools, and allows different business processes to have an automated workflow. Information can then be disseminated in an accurate, complete, and timely manner to the right parts of the organization—which realizes efficient and effective work processes at a greater speed, and caters to business solutions for a largely mobile and geographically spread workforce.

We believe that knowledge is our greatest asset, so we want to implement a range of systems, processes, and tools to identify, create, and distribute knowledge.

Communications Review: What are your investments and how do you go about creating value in these investments through the active management model?

Padmanabhan: Interoute was one of our very first investments in late 2005. Interoute has a generic IP network across 22 countries in Europe and provides a complete range of services right from duct fiber to leased bandwidth, wavelengths, Internet connectivity, Ethernet services, VPN, data switching, and data center services. Interoute provides tremendous synergies for our operating companies by providing economical and top-of-the-line connectivity across Europe.

We simultaneously made acquisitions of two incumbents, namely in Tunisia and Malta. We spent the last couple of years identifying key value drivers and transforming those integrated incumbents. In Tunisia, we created a comprehensive transformation program that identified 13 value drivers and resulted in the implementation of 85 projects. Several of those projects have been completed and some are in progress.

Tunisie Telecom also owns 51% of Mattel in Mauritania. Mattel is a GSM operator, with significant market share, and another growth company in our portfolio.

Similarly, in Malta, we identified six value drivers, which resulted in the implementation of 35 projects. Clearly that has contributed to both the revenues and the profitability of these companies. We

are also in the process of financially reengineering these companies to optimize their financial structures.

Our latest investment, which has been in Greece, was partly facilitated through our investment in Go. This was part of our plan for the inorganic development of Go and EIT investing in growth-oriented markets. Forthnet in Greece is in a dominant alt-net, which has a significant share of the broadband market. The broadband market in Greece is under-penetrated, and there is a significant upside for Forthnet to increase its customer base and market share. Furthermore, subsequent to our investment in Forthnet, it is now in the process of acquiring Nova, the only pay-TV operator in Greece. That will help enable Forthnet to offer triple-play services and benefit from an under-penetrated pay-TV market as well.

Communications Review: You mentioned that EIT invests for the medium to long term. What happens to these assets after the investment period?

Padmanabhan: Within the next five to seven years, EIT's portfolio around the world will increase significantly. At the same time, several technological developments will be introduced in the global markets, changing the positioning and the status of some of our subsidiaries. At that point, we will have to evaluate each individual investment's contributions and synergy as well as the value it adds to the portfolio in order to weigh the options.

Communications Review: What will the importance of interactivity be to the customer in the future?

Padmanabhan: Interactivity is the future. Everyone is clear about the possibilities, but not the probabilities. Be it Web 2.0, communication driven by advertising, WiMAX, multiple technology set-top boxes, etc.—all are tools that could drive interactivity. We understand and keep ourselves abreast of these developments and the repercussions they may have on our business. We ensure that we are well positioned to extract maximum value through interactivity as they gain economies of scale.

Interactivity, as it is now, is asymmetrical and fairly easy to implement. It is a key value driver, for both push and pull content. The future, of course, will be about real-time and symmetrical interactivity.

Interactivity is also defined by content producers, distributors, and the contracts. Ubiquitous availability of content across multiple media or channels of communication will be the key to consumer behavior and uptake in the future.

Communications Review: Would you aim your operating companies toward common technology platforms as old ones are switched out in the long term?

Padmanabhan: Each of our operating companies/assets is unique. Since we are not a pure-play mobile or fixed-line investment company, it is difficult for us to consider standardization of technology platforms. A common technology platform is a function of the licensing structure, the regulatory regime, the competence of the company, the propensity of the consumer to use particular technologies, and the economies of scale.

Achieving a common platform is difficult for EIT. Having said that, synergies do play a critical role, post-investments. We do benchmark our technology cost and our operation and management (O&M) cost, and drive value through standardization, economies of scale, and qualified manpower across investments.

We look at technology through the eyes of a customer rather than those of an investor; hence, we are technology agnostic.

Communications Review: What role does Interoute play in getting synergies across your companies?

Padmanabhan: Interoute's network is the largest in Europe today and offers unparalleled homogeneity, reach, and capacity. The company's fiber optic network consists of 12 rings connecting 88 cities in 22 countries across more than 54,000 route kilometers of lit fiber. Also, they have built metropolitan area networks (MANs) in 20 major European centers of business and have plans for additional cities during 2008.

The company's combined network assets represent one of the largest and most advanced voice and data networks in Europe. We view Interoute as a sort of bridge between east and west. It bridges Europe, the under-serviced "peripheral" markets, and North America.

EIT's model encourages synergies across the value chain to allow for mutual beneficial relationships between our subsidiaries. Interoute gave us the chance to do just that. For Go (Malta) and Tunisie Telecom, it provided connectivity to Europe. More recently, Go and Interoute have signed an agreement to deploy a cable from Italy to Malta.

There are several other new projects under evaluation that will add value to both Interoute and the other operators in our portfolio.

Communications Review: Are you going to develop common reporting functions for the operating companies?

Padmanabhan: Planning and performance monitoring are integral parts of active management—and among the first things that we establish upon completing a transaction. Performance monitoring entails all areas of activity, whether finance, commercial, human resources, risk, technology, information technology, or legal and regulatory. The common reporting function enables us to enhance value in key areas apart from managing risk and reducing costs. We have also established a knowledge management practice at the head office, which captures value-creation projects, performance monitoring, planning, and areas of synergies into a common knowledge management system. This helps both EIT and the staff at the operating companies to freely share information and knowledge across multiple functions.

Communications Review: Do you envisage that in five years' time you will have made another ten acquisitions, one acquisition, or none? How much capital will be put in this area going forward?

Padmanabhan: Our aspiration is to become a leading telecom investor with unique asset management competencies. The objective is to bring maximum value to our shareholders. However, investments are dependent on opportunities and market conditions. Suffice to say, we aspire to be a leading global telecom investor wherein growth is accompanied by optimized management of assets.

When he joined EIT, Deepak Padmanabhan had more than 20 years of industry experience in telecommunications, including work on mergers and acquisitions, strategy and investments, and value creation. Mr. Padmanabhan joined EIT from TECOM Investments, where he served as chief strategy and business development officer, developed the concept and design of Dubai's knowledge clusters, and led the international development of TECOM's business. At TECOM Investments, Mr. Padmanabhan also developed numerous new businesses in areas including telecom, media, education, ICT, and other industries.

Mr. Padmanabhan serves as director of GO plc, Forthnet S.A., SmartCity Kochi, SmartCity India, Tunisie Telecom, Interoute Communications Holdings S.A., and the Indus Entrepreneurs, and as the chairman of SmartCity Malta.

For more information, visit the company's Web site at www.eitl.ae.

An Interview with Mohammad Omran, Etisalat

Since 1976, Emirates Telecommunications Corporation (Etisalat) has grown from an incumbent communications operator in the United Arab Emirates to an international player leading the way in technological innovation. With record profits and growth over the past few years, what's next? Here, Mohammad Omran, Etisalat's chairman, talks about competition, growth, and innovation and how they will support the company's drive to be a leading provider of mobile and Internet services internationally.

Communications Review: Your 2007 revenues were up 31% and profit was up 25% over the prior year. Now that there is a second operator in the United Arab Emirates (UAE), what is your strategy to maintain this growth and your position in the market?

Omran: In 2004, the telecom market in the UAE opened to competition. The Telecom Regulatory Authority was set up at that time and changes were made in Etisalat. We made changes in the upper levels of management, which helped our business grow much more, to annual growth of around 30%. The second operator started last year in 2007 and announced that they have 1.5 million mobile customers at the end of the year. We have around 6.6 million. Even with competition we had very good results, one of our highest.

We achieved this growth by refocusing our business and developing better relationships with and understanding of the customer. The UAE is somewhat unique. We are a small country but we have a lot of visitors, and mobile communication is very important to them. Visitors may use their existing mobile phone or buy one at the airport. In the UAE, we have very high international communications traffic with the rest of the world and very high roaming from all over the world.

No doubt now we are not on Easy Street, with mobile penetration at 150%. However, I believe that this growth will continue. One reason is visitors. Tourists and business travelers use a lot of communication. But also, people here tend to have more than one mobile; one is for voice and the other one for the Internet. I also see demand for machine-to-machine communications, which adds a new dimension for applications currently not available.

Communications Review: What role does innovation play at Etisalat, and how are you using it to compete?

Omran: One of the main characteristics of Etisalat is that we are not afraid of new technology. We always like to adopt new technology fast and sometimes much faster than others. We have been this way for a long time. The first mobile network in the UAE was totally new in 1982. At that time, I was involved in the initial forecasting in which we anticipated that gaining 5,000 customers would take three to five years. We met that goal in one year, even though the cost was very high and the mobile was not a portable—it was a big one that fit in the car. So then we put out a large portable phone, and that was visionary at the time.

When GSM was introduced, there was a special group for European countries that were looking to set up a mobile system for the European Union. There were 17 operators in Europe who were members. We heard about it and we wanted to join. They said, but you are not European. We said, yes, but we like this technology and we want to market it in the GCC [Gulf Cooperation Council] because we, also, have a small number of countries and we'd like to have one network that works for all. That was back in 1986–87. At the time that we submitted our memorandum of understanding to the GSM Association, an Australian operator also expressed interest in becoming a member. So they became number 18 and we became number 19. We installed our network in 1993.

So you see, this is the way we are at Etisalat: We are not afraid to adopt new technology—we like to adopt it. And the market likes it and the customer likes it. We had people from all over the world coming in to the UAE, so we had to offer the best technology at a lower cost. Today, the UAE is one of the countries in the East and among the Arab countries that offers the cheapest cost per minute for mobile.

The same thing happened when the Internet came. In the beginning of the 1990s we sat together and tried to visualize where growth was going to come from. We determined it would be in mobile and in the Internet and started thinking about how we could become a leader in those areas. At that time, most of the Internet wasn't necessarily straight into the region and most operators who offered Internet access were not telecom companies. But we said, we—not someone else—will offer Internet access because we can.

In the beginning you needed to connect with the United States because the databases were in the US at that time. If you look at the globe, the US is on one side and we are on the other side. So we linked with the US through the East via Japan and the West via Europe, which gave us very good advantages and, in the case of a cable cut, ensured that we had backup.

Then we developed EMIX, Emirates Internet Exchange, through which we offered bulk Internet bandwidth connectivity to countries around us. Some of those countries have developed their own networks, but at that time EMIX was the main network. If you look at the Middle East, the UAE has the highest Internet usage.

Our approach to adopting the latest technology can be risky, but we found that the advantages are greater than the risks. We've decided now that we want to offer fiber to the home [FTTH]. There are new technologies, like GPON [gigabit-capable passive optical networks], which allow you to take fiber to every house or apartment. We will offer very high bandwidth, 40 to 100 megabits per second, which can be used for video, Internet, and voice.

I also want to mention something about video that is unique for Etisalat. We decided many years ago to establish a cable TV system. Our system is the only one in the whole Arab region with real cable TV to the home. We used hybrid fiber coaxial, but now the next stage is to go FTTH all over. This opens a lot of potential for the home and for business markets. In Dubai City, I think 90% of the buildings are compatible with fiber already. We have advantages because we are a small country. We have people who are willing to pay for good quality. When you have those two things, you can do a lot.

Communications Review: On the consumer side, do you see a lot of demand for video services?

Omran: We see a lot of new things coming on mobile video. Video is coming—and coming in a big way. It will not be basic video, but interactive gaming and home shopping. These are the things we see coming and what the market needs.

We are already competing with satellite operators and buying from them as well.

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We offer Showtime, ART, and Orbit to our customers, but we are also developing our own channels and we are buying some other channels because we are not in the media business. We need to be more active in the whole communications value chain, and that, media and video, is one of the areas that is very important.

Communications Review: After gaming and video, where do you see other revenue growth opportunities?

Omran: I don't think anyone knows. We adopted 3G fast and were among the first operators in the region to offer it. At the time, everyone said there is no future or demand for 3G. But it has already come and the demand is for Internet connectivity. We should not forget that people need access to the Internet everywhere. In the UAE, we have a lot of DSL and fiber to the home, but people are constantly on the move and need the mobile Internet. In Saudi Arabia, we offer unlimited Internet on 3G, and we have more than 150,000 customers, which is quite significant.

We use HSDPA [high-speed downlink packet access] and offer 100 gigabits per month for 100 dirham (US$27), which is good. If you go to a hotel and want to hook up to the Internet, you will pay $20 to $30 per day. But with a mobile, you could get monthly access for 100 to 120 dirham per month. This is what most business travelers want.

Communications Review: You have operations in the Middle East, West and East Africa, Pakistan, and now Indonesia. Will this international expansion continue, and what will be your focus for investment?

Omran: When we expanded internationally, we were thinking about mobile growth. Initially, we had a very small operation in Tanzania in Zanzibar, but the big bang came when we decided to bid for the second mobile license in Saudi Arabia in 2004. We made a bid there, won the license, and paid more than $3 billion for it. Many people said that was too high, but today in Saudi Arabia we have 11 million customers. We have a very good management team there. When we went to Saudi, we took a good core team, many engineers, and finance and administration people, and we built the bigger team around that core. Mobily is now a very important operator in the region, with more than 40% market share.

Not all international investments are perfect like that, where you can start from scratch and build your own systems and network. There are more complex markets, like Pakistan, which has a legacy system, competition, and complex regulation. Initially, our entering the market there was difficult, but it is much better now.

Pakistan Telecommunications Company Ltd. (PTCL) was government owned and had more than 60,000 employees. We worked with the government to develop a voluntary retirement program and help those people who retired to invest and use their money wisely. Around 30,000 staff accepted retirement. The market there was very competitive, with many licenses; it is very complex. However, we had very good people there to develop a strategy and build a much better operation. PTCL was in decline for several years, and now it has started to grow again.

Next we invested in West Africa, where a lot of development is happening. One thing that I always say to everyone I meet in a country where we are investing—the government, the regulator, our staff—is, how can we add value to the country? Because when you add value, they appreciate it and will use your company. It is a win/win for everyone.

In West Africa, we bought a small operator that has licenses in different countries; it was a complex ownership structure. We put some of our management team and consultants there, and it is delivering very good value to us.

When we submitted our bid in Egypt, mobile penetration was around 20%. I said then that in three years, penetration will reach 50%; and many people said, no, they have no more customers. Morocco was similar to Egypt and it grew to 45%, so why not Egypt? They said, no, you are too optimistic. This growth represented 40 million customers, up from the existing 20 million. My target was to get 10 million of this addition, and leave the other 10 million for the two existing operators. After one and a half months we had one million customers, and within seven months we reached three million customers. I have since heard some analysts say that penetration will reach 60%. I like that.

This is not the end of international investments for us. Recently, we announced that we're going to purchase 16% of Excelcomindo in Indonesia. We continue to look at India, which has just issued a new license, and we have established very good relationships there.

It is like this: You need to identify the opportunities and companies, and, when they become available, you need to evaluate how you can add value to that country, your partners, the customers in that country, and your shareholders. The UAE is a small country, but it has very good relations with almost every country in the world. The UAE is respected by many countries around the world because although it is small, it is very active. There is not much in terms of internal politics that prevents our country from developing. This is a good base for Etisalat to build on when we look for international investments.

Communications Review: What are your plans to drive synergies across all your businesses?

Omran: We are working on how to offer our customer base across the network—Saudi, Egypt, Pakistan, the UAE—cheaper and simpler roaming. We have to develop something different to meet customers' expectations while still making money.

In the UAE, we are used to working with multiple cultures because we have a population that represents almost every country. All differences are manageable when they're put to good use; that's the way it works. But the market expectation and the market dynamic are different in each country.

One of the first things we tackled across the businesses was capex [capital expenditures], and everyone has benefited from it. Next was project management; we are very good at it and are doing some things in Nigeria. We are also very good at financing. We need to unify how we make financing available to everyone. Marketing is more complex—we do not

want to interfere with the local marketing, because of the different dynamics in each market. But we need to think about how we can add a layer where each company becomes a member of a larger network. It isn't easy, but it is doable when you have the right people.

Communications Review: Who do you think your main competitors will be in five years?

Omran: I can't speculate. No doubt that newcomers like Google are making disruptive technologies. But we want to see how we can benefit from that rather than focus on competing because we own the customer. How can we align with the other companies to drive greater value to everyone?

Mohammad Omran is chairman and chief executive officer of Etisalat. He was appointed chairman in 2006 and for the last three decades has been the architect of Etisalat's design and development. He has transformed the company from a well-respected telecommunications service provider to a leading regional operator with more than 33 million customers across 15 markets.

He also serves as the chairman of Thuraya, the satellite mobile telephone operator based in the United Arab Emirates.

Mr. Omran received his engineering degree in electronics and communications from Cairo University in Egypt.

For more information, visit the company's Web site at www.etisalat.ae.

An Interview with Khaled bin Abdulrahman Al-Jasser, Saudi Telecom Company

Saudi Telecom Company (STC) was privatized in 1998 following the government decision to transform the telecommunications sector. Since 2004, the Communications and Information Technology Commission has awarded multiple mobile- and fixed-facilities-based licenses to other operators to further liberalize the market. STC has been successful facing competition. The company continues to improve and adapt to a changing market as its new competitors prepare to provide mobile, fixed, and broadband services, as mobile penetration rates soar, and as opportunities outside Saudi Arabia hold the promise of long-term growth. We sat down with Mr. Al-Jasser to get his insights on what's next for STC and the challenges and opportunities of bringing new services to customers in all the company's markets.

Communications Review: Your consolidated 2007 revenues were up 2%. Now that there is a third mobile operator in Saudi Arabia (and three fixed licenses have been issued), what is your strategy to maintain that growth and your position in the market? How do you see the market changing in Saudi in the next few years?

Al-Jasser: *Alhamdulillah,* STC in 2007 also delivered to the expectations of our stakeholders. We managed to close the year with growth in revenue amid all the changing market dynamics. We believe that was the result of unmatched efforts by the entire STC team and management. We also believe that our recently implemented, forward-looking business strategy was of "cornerstone" significance to all this. *Inshallah,* the future will also witness the dedicated efforts of the entire STC team to deliver on all the market and stakeholder expectations.

Yes, the telecom market in Saudi Arabia is undergoing significant changes and becoming much more competitive, with more entrants in both the mobile and the fixed-line-facilities-based operations. One of the advantages of increased competition for us is more focused and customer-based strategic directions. We have transformed our company from a government organization into a very competitive business, and during this process we were able to view our strategies and operations in more cross-functional, customer-centric dimensions. We are excited about building further upon our established, innovative products and services to satisfy customers' growing needs and expectations.

In terms of customer centricity, we are the only operator to offer full, end-to-end services to our customers, integrating fixed and mobile voice, data, media, and content services with anyplace, anytime telecommunications connectivity. We have simplified our organizational structure to serve individuals and home, business, and wholesale customers. We have tailored our customer care operations and have optimized our sales force to specific customer segments. Our major business account customers are served by dedicated full-time sales and customer care teams, often co-located with the customer.

To our residential customers, we offer direct services via our shops or indirectly through our extensive dealer network. Our Web site, www.stc.com.sa, is available continuously, with fully automated, self-serve functionality for customers to access all our products. Customers can add new lines, disconnect existing ones, etc.—they can access everything across our mobile and fixed product ranges. Our customers may also view securely all their services, including billing status, subscriptions, and activate/deactivate features. A customer request is submitted online and an e-mail or SMS with information about the completion status is delivered to the customer.

Businesses also have online access for their telecommunication needs and services with additional features, such as enabling one or more employees to administer all their services through our Web site.

Better customer focus and innovative services will enable us to capture new customers as they enter the market while retaining and increasing the ARPU [average revenue per user] of existing customers. For instance, Al Jawal, our mobile unit, launched 23 new services in 2007 to maintain its leadership position in the market.

In the future, we expect the regulator to rule on the bundling of services, so we can offer better pricing and value to our customers. We are also expecting the regulator to rule on service-based operators (MVNOs). Both of these rulings would enable us to provide better service to our customers and maintain revenues and customer base.

Communications Review: How high do you think mobile penetration rates can grow?

Al-Jasser: Mobile penetration is approximately 120% in the Saudi Arabian market. Double SIMs [subscriber identity modules], new services targeting the youth and business segments, telematics, and a variety of connectivity opportunities will continue to increase penetration rates. We find that many customers have two mobile phones, sometimes three. Our customers possess both a business and a private phone, and even purchase products from two operators just for comparison. These customer behaviors, combined with providers that include inactive subscribers in their subscriber base numbers, could drive penetration rates as high as 170%.

Communications Review: How large do you think the machine-to-machine market will be? Do you expect any other mobile applications to drive revenue?

Al-Jasser: We think there is huge potential in the telematics cities. Basically, a customer premises product with a SIM card can provide many information-rich services for our customers. There are many applications for these telecommunication technologies that can be used, for example, for monitoring by the police, tracking home deliveries, reading meters, and so forth. These areas are not being serviced at present.

We already provide a selection of location-based services that can be downloaded to a customer's mobile. For instance, our customers can request the nearest restaurant and we will show a list. Our customers may choose, say, an Arabic restaurant, and then will be sent a message and a map. Customers can also use the service to find friends, relatives, etc., while respecting the privacy of the other party. If, for example, your friend wants to find you, he can send you a message. If you accept it, then a map of where you are is sent to him. We also offer digital maps for all the main places in Saudi Arabia. We earn revenue for each of the SMS calls for these services. As part of our community support strategies, we provide these applications free for ambulances and other emergency and community services.

Communications Review: What are your plans for video services?

Al-Jasser: We are strongly debating the video services strategies among operators and the Ministry of Information. Currently, a telecommunication service provider may not distribute television channels on mobile phones without the approval of the ministry. It is a challenge, but we believe there must be a change toward liberalization of media and data channels

between telecom and media operators. Eliminating those restrictions and permitting the convergence of services will enable us to provide additional services to our customers.

Communications Review: You are offering fiber in the corporate market, but what about the consumer market?

Al-Jasser: At present, we are piloting fiber-to-the-home in three areas. Laying the fiber is not a primary concern as an operator—the concern is the wire inside the house, especially in older homes. We will test the speed and the quality of the results. Once the trial is finished, if the quality of the service is not acceptable, we may change the installation policy to include upgrading the wiring inside the house. We want to provide high-speed, high-quality services to our customers' homes, and we will ensure that our policies and procedures are customer centric. I want to emphasize that fiber is already available to our business customers at their premises.

Communications Review: If you were to build right into the home, would the regulator require you to resell that capacity to another operator in the future?

Al-Jasser: We are in discussions with the regulator on that subject. Our progress to date is very encouraging, and we should expect and anticipate better options for our customers in the future.

Over the years, STC built and now operates a very substantial network, and we work to provide telephone service to all citizens, even in areas where it is not profitable. We believe that all citizens have the right to telephone service, to communicate with their family, and to contact emergency services if the need arises. We have made very significant capital investments throughout KSA [Kingdom of Saudi Arabia], and it is appropriate for the other operators to support providing services to remote areas of the kingdom.

On the other hand, we already share our network in the mobile market with our competitors. We see our competitors as customers of our wholesale business unit, and we link their switches with our network and with the networks of others. We have a roaming agreement with our wholesale customers, and all their international traffic goes through STC gateways.

Communications Review: How does regulation in your sector affect your strategy?

Al-Jasser: In Saudi Arabia, we have had challenging regulations from the beginning. Usually, regulators in other countries allow the market to stabilize first, after the introduction of entrants, until people understand that the service and the competitors are growing. Then they allow certain services, like number portability and national roaming. In Saudi Arabia, those services were allowed from day one.

STC is regulated more heavily than our competition because the regulator seeks to strengthen our competitors to ensure a healthy marketplace. For example, if we want to introduce a service or reduce prices for one of our services, we require the regulator's approval. Often we are not allowed to reduce prices, and other times we are not allowed to offer services at prices below the competition. In the meantime, although we support fair competition here in the kingdom, our competitor's requests to the regulator are decided quicker. We look forward to the time when our requests to provide better products and pricing to our customers are treated equally to those of our competitors.

Since its inception, STC has been a strong supporter of an effective regulator in the market. STC contributed a significant effort to help the government and the Ministry of Communication establish the Communications and Information Technology Commission. We continue to support the regulator and to encourage a fair and equal competitive environment.

Communications Review: What new services or new revenues do you plan to generate as a result of fiber?

Al-Jasser: Tactically, the introduction of basic Internet services over DSL for all of our customers is our immediate focus. In the future, we will offer multi-play services to our customers, including data, voice, television, games, movies, and music. We tested such offerings with customers last year with positive results. In the third quarter of this year, we are expecting to start offering multi-play services on a limited basis.

For our home customers, we are envisaging multi-play services with 10MB to 14MB nodes. Businesses, though, usually require greater bandwidth because of their service needs, so from day one they will have fiber as a standard. We are working with building owners to link premises with fiber so that when the building is ready, our services also are ready for deployment. The fiber infrastructure is economically feasible for the bandwidth of services it enables and the revenue realized from multi-play services.

Communications Review: You have international investments in Malaysia, Indonesia, India, Kuwait, Turkey, and South Africa. Will this expansion continue, and, if so, what will the focus be?

Al-Jasser: In the past, our focus was on our domestic markets, ensuring that our strategies matched the needs of our national customers. Once we were satisfied with the execution of our domestic strategies, we prepared to implement our investment strategies.

Our strategies for international and domestic investments stated that by 2010, 10% of our revenue will come from investments outside STC. We are keeping close surveillance on the market and will embrace opportunities befitting our overarching STC goals and aspirations. We are situated in the middle of the Arab world, covering all the Arab countries, and we can easily go to Indonesia, India, Pakistan, Afghanistan, and North Africa.

Communications Review: Your current major investments are as minority shareholders. Is that a structure you like, or, potentially, is that just a stepping-stone to taking control?

Al-Jasser: This varies; however, on a broader-term basis, STC believes more in a strategy of business control and value-added investment propositions. Our intention is, primarily, different than the concept of asset trading.

In Maxis, our current position is more than an investment. It is a joint control arrangement whereby we have a CEO

working together with the CEO of our investment partners and the government representative. As for NTS, we control it totally. We hired the president and VPs of the company, who established a strong team to implement and operate customer-centric services. Working in Indonesia has been a good experience for us. It is the first time that STC is running a company outside Saudi Arabia.

Turkey is a growing market with a large population and attractive growth opportunities, especially in broadband. Our recent investment in Oger is a good one for us, and we look forward to jointly developing and providing services in the growing markets served by Oger.

In India, there is great potential and we have learned a lot already. We want to approach the market from a value proposition perspective. Our pricing may appear high at first glance but requires a closer look at the services included in the packages. Our customers will find a number of value-added services included for free. So if one adds up all the costs of the value-added services, one will find that our prices provide economically sensible offerings for the needs of customers.

In Kuwait, ARPU is very high and pricing is different, so we will make changes not by reducing price but by the way we price. For example, in Kuwait, where landline local calls are free, a landline call to a mobile phone impacts mobile customers because they are charged. I believe we can make meaningful and strategic changes in this market and make it attractive for Kuwaitis to use our products and services.

Communications Review: What are your two biggest challenges or the two things that keep you awake at night in terms of the business?

Al-Jasser: I am excited about other operators entering our Saudi Arabian market and am looking forward to fulfilling customers' expectations. I believe leveraging our strengths and opportunities on quality and availability of service, while we are serving more areas and customers and expanding internationally, will be challenging. The second challenge is streamlining our cost structure. If we want to sustain and grow profit levels, we will have to manage costs better.

Inshallah, with our employees focused on our customers—and by providing innovative and quality products at competitive pricing, expanding internationally, and continuing to focus on costs—we will satisfy our customers and shareholders.

Khaled Al-Jasser was appointed vice president of corporate strategy in November 2007, having previously been vice president of Al Jawal, the mobile business unit of STC, which he headed from December 2006. Prior to that, he held positions as vice president of marketing and sales and vice president of IT.

He obtained his degree in business administration from King Saud University in 1986 and joined STC the same year. He gained extensive experience within the company through holding influential positions in various departments, including billing, customer services, and network services.

Complementing his leading role as vice president of corporate strategy, Mr. Al-Jasser is a permanent member of the STC Management Committee and also serves on several steering committees and in management teams' leadership.

For more information, visit the company's Web site at www.stc.com.sa.

An Interview with Dr. Saad Al Barrak, Zain Group

Since starting as Kuwait's first mobile operator in 1983, Zain Group has grown to become the fourth largest telecommunications company in the world, in terms of geographic presence, and the third largest in the Middle East, in terms of market capitalization. Zain's footprint covers 22 countries, and the group serves 45.7 million customers (as of March 31, 2008) across the Middle East and Africa. Here, CEO Dr. Saad Al Barrak talks about the group's aggressive growth strategy and how they plan to reach their goals in the next three years.

Communications Review: Zain's corporate strategy, "3x3x3," is ambitious: to become a top-10 global mobile provider by the end of the year 2011, with a subscriber base in excess of 110 million and US$6 billion in EBITDA [earnings before interest, taxes, depreciation, and amortization]. What is the key focus for achieving this growth?

Al Barrak: Africa and the Middle East are key growth areas, for slightly different reasons. In Africa, growth will come from customer acquisition and geographical expansion into adjoining markets. Currently, we operate in 14 countries in Africa—with the addition of operations in Ghana later this year. Although in the majority of these countries we are the market leader, there remains room for greater penetration and customer growth through new customer acquisition, in-country network expansion, and new services such as the imminent launch of 3G in Nigeria, planned this year. Nigeria is particularly appealing in terms of growth, given its 150 million-plus population that has penetration rates of less than 30%.

In the Middle East, market penetration is generally higher and geographical expansion is more limited. We believe growth will come through value-added services, such as high-speed wireless Internet access, and increased ARPUs [average revenue per user] from our existing customer base—stemming primarily from increased data services and applications. The Saudi market, which we will enter in Q3 of this year, offers us access to a huge addressable market hungry for high-speed services as well as the benefits of the One Network service that will connect Saudi to others already on the service. Iraq, too, with market penetration of about 40%, offers great potential for growth and customer acquisition. There we have some 7.7 million customers in a country with a population of more than 25 million people.

The enterprise market is also a growth area and one that is dependent on the availability of high-speed data networks (3G upwards). Last year we launched an HSPA [high-speed packet access] service in Kuwait that provides speeds up to 7.2Mb, and we launched the world's first nationwide, high-speed WiMAX service in Bahrain that offers speeds of up to 4Mb. With these speeds, our enterprise customers can enjoy most business services and applications, such as e-mail, Internet, and intranet access, and access to other business applications without being tied to a fixed connection.

The nature of today's consumers—business, residential, and, especially, the youth sector—is that they want access to the Web, video clips, music, etc., at a time and a place that suit them and that are not necessarily tethered to a hard-wired computer terminal on a fixed network. With 3G and 3.5G networks and services, there is little that can't be achieved wirelessly. Zain in Jordan will soon launch 3G, and we have already committed $1.3 billion for an advanced technology infrastructure in Saudi Arabia (including a 3G network) when we launch operations this year. We also plan to introduce 3G services selectively in Nigeria in Q3 2008.

Communications Review: Which types of services are likely to generate the most opportunities for you: content, banking, serial networking, advertising?

Al Barrak: Zain is not in the business of creating content; rather, we provide access to it and thus high-speed networks accessing content will generate greater ARPUs. Financial transactions using wireless networks are set to grow. In Kuwait, we worked recently with the National Bank of Kuwait to deliver a service that allows customers to make micropayments using their handsets to pay for low-value goods remotely over our GPRS network, away from the vendor's premises. The service is still in its early days, and after a period of time we will evaluate demand for such a wireless solution.

Communications Review: What is the biggest challenge you face in reaching your 3x3x3 strategy?

Al Barrak: The challenges we face are simply those associated with any business that is on such a rapid ascendancy as Zain is: to give all of our 22 operations the attention and support they need to ensure that local plans and goals are met and that customers are provided with the best services and a great brand experience. All of our operations are in competitive markets and we work in probably the fastest-growing dynamic market, which is in a state of continual change and evolution. However, Zain thrives on competition, and to be a leader in this industry means making the latest, most appropriate products and services available to customers.

Communications Review: You recently acquired a mobile license in Saudi Arabia. Coming in as the third operator, how do you plan to gain market share?

Al Barrak: From day one, we plan to offer the best products and services. We will invest more than $1.3 billion to put in place a state-of-the-art 3G network when we launch service later this year that will give technology-sophisticated Saudi's high-speed access to a host of services, such as video-streaming and other multimedia applications. Although mobile penetration in Saudi is high (currently around 85%), the latest figures also show a SIM [subscriber identity module] penetration rate of 143% in the United Arab Emirates and 136% in Bahrain (at the end of 2007). This highlights that there is still room for further penetration in Saudi. On top of that, half the population of Saudi is under the age of 20, so prospects of growth are very promising for the economy in general and consequently for the telecom industry.

Importantly, we intend to introduce into Saudi what is effectively the world's first borderless mobile network that will eliminate cross-border roaming charges.

Launched initially in Africa by our subsidiary Celtel, One Network is leading a paradigm shift in the mobile industry by focusing on customers' needs rather than on geographic borders. The launch of the service in East Africa in 2006, followed by the recent extension to 12 countries, has been crucial to Celtel's strategy of ensuring that our customers in Africa are connected through one borderless network. Additionally, One Network plays a crucial role in helping to promote and boost cross-border trade while helping to drive economic growth across Africa. More than two million people have already used the One Network service, which covers a geographic area that is more than twice the size of the European Union.

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Our Middle East operations recently rolled out a One Network service linking Bahrain, Iraq, Sudan, and Jordan. This service allows Zain's 14 million customers in Bahrain, Iraq, Jordan, and Sudan to be part of a pan–Middle East mobile community, providing them the opportunity to communicate between these countries and be treated as local customers in terms of pricing, while using their home network service.

User friendly, the One Network service is a non-burdening experience. It is automatically activated when Zain customers from the four countries cross borders, thus enabling them to stay in touch with friends, colleagues, and family members at a reduced cost.

This truly is a defining moment in the history of the Middle East and global telecommunications and a major step forward in Zain's intent to become a top-10 global mobile operator by 2011. The launch of One Network in the Middle East helps fulfill our promise to deliver to our customers a unique and rewarding Zain brand experience through the products and services we offer.

In Kuwait, we are still waiting to be provided with our own international gateway (direct access to international networks), which is necessary to enable One Network service. As soon as that is provided by the Ministry of Communications, we will include this important market in our roll-out plans. The same applies for Lebanon, where we are managing the network on behalf of the government.

One Network, therefore, will be a key attraction for Saudi and other Middle Eastern customers. It is but one example of the real and tangible benefits of our extended family operating under one brand and seeking to deliver one exceptional customer experience, wherever our customers use our services.

Communications Review: How does sector policy and regulation affect your global strategy, and how do you balance the regulatory requirements across 22 countries?

Al Barrak: Aside from "customer welfare" (reasonable pricing, monitoring for anti-competitive practices, etc.) and legislation for interconnection and access arrangements, we see the role of the regulator as ensuring a fair and equitable marketplace for all operators. Regulation is a fact of business life in the telecoms sector; therefore, we take regulation, and the different regulatory environments within which we operate, very seriously. Nearly all of our 22 operations in Africa and the Middle East operate in regulatory environments that are at varying levels of maturity and development. In many of our operations, regulation is still in the developmental or early implementation stage.

We work closely with regulators in all our markets, and, indeed, the launch of One Network was greatly helped by the close cooperation of the regulators in each operation.

We recently held a regulatory workshop in Bahrain attended by representatives from all 22 of our operations. The workshop invited industry experts and a regulatory representative to address our delegates and to not only share their perspectives on regulation but also provide training and coaching on the complexities of the regulatory sector.

By sharing experiences and skills across our operations, we will raise the standards of our own teams, which will be of direct benefit, and will make a positive contribution to the regulatory environments in each country.

Communications Review: How important are alternative business models—sharing networks/service platforms, outsourcing, shared services centers—to Zain?

Al Barrak: All are feasible if the business case supports such in the betterment of servicing our customers and our stakeholders. In Saudi Arabia, at launch we will be approximately 55% self-sufficient and we will use other existing mobile operators' infrastructures and networks for the other 45%. In a country as vast as KSA [Kingdom of Saudi Arabia], it would be impossible to cover 100% of the population at start-up. Such a network takes several years to build, and thus the need to cooperate and share is vital in many ways.

Communications Review: With the aggressive growth strategy you have, how will you manage shareholders' expectations? How do you ensure strong corporate governance with such a diverse portfolio of operating companies?

Al Barrak: The answer to the first question is addressed in the second; clear and transparent reporting, corporate governance, and world-class best practices and standards are fundamentally crucial for Zain. We issue detailed quarterly and annual reports on all of our operations. Our 3x3x3 and ACE [Accelerate, Consolidate, and Expand] strategies and reports are well publicized and publicly available on our corporate Web site.

The Zain Group's vision is to be a top-10 global mobile telecommunications operator by 2011, and to be a global leader we have to operate at the highest possible international standards. We recently put in place a three-year framework agreement with DNV (Det Norske Veritas) that will help ensure that Zain's operations in the Middle East and sub-Saharan Africa are fully compliant with the rigorous ISO standards. This agreement sets a global benchmark for our core business processes.

Zain's operations in several countries are already ISO certified in a number of areas. But the agreement with DNV provides for a common approach to process and standards assessment, giving high-level management visibility across all Zain's operations in the Middle East as well as the group companies in Africa that currently operate under the Celtel brand.

Communications Review: What initiatives do you have under way to support your culture of being socially responsible? With operations in a lot of emerging markets, how will Zain contribute to the cultures of those markets beyond communications?

Al Barrak: In every country where we operate, we view good corporate citizenship as paramount. Aside from our responsibilities to our shareholders and the need to provide them with good returns on their investments, each region and each country has its distinct priorities. Generally speaking, each year we spend millions of dollars on the key themes of education, health, and social welfare. We

also prioritize the well-being and development of our 15,000 employees through investment in training and development programs, health and welfare schemes, as well as social and family activities. Not only is this approach good for Zain, but it is also good for the personal development of our people.

One initiative under way will benefit the 200,000 fishermen who work on Lake Victoria. They will soon have the opportunity to use mobile phones to call for help if they get into trouble on the world's second largest inland lake. Celtel along with Ericsson—in an initiative coordinated by the GSMA's Development Fund—have committed to extend the mobile networks across the Lake Victoria region, fuelling economic and social development of the lakeside communities and potentially reducing the number of fishing-related deaths each year.

Zain and Ericsson are upgrading Celtel's existing infrastructure and building an additional 21 radio sites to provide mobile coverage up to 20 kilometers [approximately 12 and a half miles] into the lake. This will take about six months and will ensure mobile coverage to more than 90% of the fishing zones, where up to 5,000 people die each year from accidents and piracy.

Increasingly, the environment is coming into our corporate spotlight, with initiatives such as one launched last year in Kuwait, where we recycle tons of paper, plastic, and metal waste. We also are looking to recycle the huge batteries that are necessary to drive remote base stations.

Importantly, too, rolling out One Network will do much to help boost and encourage small and medium businesses as they seek to grow into neighboring markets where our service is available.

But there is also an element of fun and entertainment that adds much to the societies where we operate. In Africa, it could be sponsorship of musical events and concerts; in the Middle East, it is more likely to be Islamic celebrations such as Ramadan and Eid occasions.

Communications Review: Who do you believe are likely to be your key competitors in the next five to ten years?

Al Barrak: As markets mature, we expect competition to come from the already established global operators. Obviously, Africa and the Middle East have their distinct attractions for different operators. At Zain, we have become adept at being strong defenders of operations where we have maintained our leadership through offering customers the very best products and services. At the same time, we are hugely successful competitors when winning licenses in new markets.

Dr. Saad Al Barrak is the deputy chairman and managing director of Zain (formerly MTC). Since his appointment in mid-2002, and through the implementation of his vision of the "3x3x3" profitable expansion strategy, Zain has built on its customer base of 600,000 as a single operator in Kuwait to become a conglomerate of 22 operations with more than 45.7 million active customers across the Middle East and Africa and a market capitalization of $29 billion (as of March 31, 2008).

Dr. Al Barrak holds a B.Sc. in electrical engineering, an M.Sc. in systems engineering from Ohio University, and a Ph.D. in information systems and technology management from the University of London. He is also an alumnus of Harvard University.

He has received many industry awards and formal recognition. In April 2008, Dr. Al Barrak joined the board of the GSMA, the global trade association for the mobile industry.

For more information, visit the company's Web site at www.zain.com.

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How Consumer Conversation Will Transform Business examines how new technologies and methodologies are transforming a new source of consumer data—the customer's thoughts, intentions, and innovative ideas obtained from conversations found in blogs, message boards, phone calls, and other interactive media—into a dramatically deeper understanding of consumers. To download the PDF, visit www.pwc.com/convergence.

Global Entertainment & Media Outlook: 2008–2012 was created by top minds from PricewaterhouseCoopers' Entertainment & Media (E&M) practice, in conjunction with economic forecasting firm Wilkofsky Gruen Associates. This ninth edition of the *Outlook* provides in-depth forecasts and analyses of the E&M market between now and 2012. The *Outlook* includes an overview of the global E&M market as well as in-depth coverage of the markets in the US, Europe, the Middle East, Asia Pacific, Latin America, and Canada. All orders can be placed through PwC's *Outlook* Web site at www.pwc.com/outlook.

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